

The Games machine

THE FUTURE IN YOUR HANDS

TX: 017 APRIL 1989

"Elite's going to be hard pushed to top FOFT - 89%"

The One (October 1988)

"Well worth thirty quid"

New Computer Express

"Well worth the £29.95 entry fee - 96%"

Popular Computing Weekly

NO!

WHY FOFT MUST FLOP

Gremlin's quest for interstellar wealth - see page 43

Save the hard stuff for the good stuff:



POPULOUS



SILKWORM

WIN A TRIP TO ROME!
WIN A



EXCLUSIVE:

PROFESSIONAL
MICRO
MUSIC!



CORAL SEA, MIDWAY, SAIPAN RELIVE THE BATTLES THAT

[illegible]

The book's opening section, "Introduction," sets the stage for the rest of the work. It begins with a quote from the author's father, "I want you to know that I am proud of you," which serves as a powerful metaphor for the book's theme of family and legacy. The introduction also provides a brief overview of the book's structure and the author's personal journey.



ATA CRUZ, SOLOMONS.. AT CHANGED HISTORY

LUCASFILM™ PRESENTS
BATTLEHAWKS
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IBM PC £24.99

- Over 25 fully playable combat missions, featuring over 100 aircraft, ships, and submarines. Includes a fully featured mission editor to create your own missions or to modify existing ones.
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The Gamer machine

THIS ISSUE . . .

WIN!

**A FINE 12 INCH
THE CHAMP
TROPHY PLUS 10
POUNDS OF
SWISS
CHOCOLATE!**

Sweet-eating Livid give away the goods, including a pound of swiss chocolate to each of the 10 runners up, and copies of *The Champ* to all winners.
See page 60

WIN!

**A PC ENGINE
BUNDLED WITH
THREE TOP
ENGINE TITLES!**

Courtesy of Micromedia. And if you don't win the Engine, we're giving away a Boban (that's a wooden sword to you) to the runner up!
See page 60

WIN!

**DIAL 0898
555080 AND
YOU COULD WIN
POPULUS WITH A
MODEM!**



Plus other Electronic Arts titles for 5-bit owners.
See page 61

WIN!

A TRIP TO ROME!

Can it be true, is CRI really giving away a holiday in Rome? Is the Pope Polish? Here's your chance to visit the city that wasn't built in a day. Plus 50 copies of *I Ludovici* for the runners-up - and that's no papal bull!
See page 61

JOIN THE CR

**The Man
BAD DUDES
ARE TOP HITS!**

Four opponents in your
control. An opponent who
shoots. Four types of fire: single, star-dropping,
missiles, and a special power-up. And a host of
other things you must overcome. The final mission is
a long one. Some enemies are huge. Some are
invisible. A fire-breathing bat flies. An alien God
Goes Bang—who keeps disappearing when it's
nearly time to go.



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Take on the role of
steering angels you
must out-might just as
to the perpetrators of
evil and destruction. Some of
the most exciting games ever to fill a
computer screen confront you. The future is here
and now, when you take up this challenge... PART
MAN - PART MACHINE - ALL CDP ... ROBOCOP



EXPLOSIVE



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DUDES**



**PART
MAN**

**PART
MACHINE**

ALL

**CDP
FIRE NOW**



**FIRE
HAZARD**



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£8.95
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COMMODORE
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**SPECTRUM
AMSTRAD
COMMODORE
£9.95**



1. **Introduction**
 2. **Background**
 3. **Methodology**
 4. **Results**
 5. **Conclusion**
 6. **References**



**HE'S THE MEANEST
SON OF A SNAKE
YOU'VE EVER SEEN!**



Downloaded from <http://ajphaphysocpharm.sagepub.com/> at 10:06 11 June 2015

HE'S THE

[illegible]

U.S. Coast Guard, Station 123, Millard Ave., Millard, Birmingham, AL 35204

TGM PREVIEWS

Nerves of steel

Electronic Arts plunges you straight into a 3-D World War II with *Advanced Tanks*—and continues their reputation for top-class PC simulations at the same time.

First-person perspective must add to the atmosphere of the sophisticated sim, which mixes strategy and combat skills in a high-tech tank complete with thermal-image night vision and a range of modern



weapons.

Advanced Tanks, which should be available now for C34 PCs, features eight missions from the near future, against Soviet vehicles including a top-score 1935-5 White Battle Tank. And for the historically-minded, there's also a World War II campaign to fight in the game programmed by Dynamics.

More Chuck for your buck

A bigger, better version of Chuck Yeager's *Advanced Flight Trainer* is out from Electronic Arts—with new terrain and airports, the rapid voice of Chuck himself coaching you along, and even more aircraft types (bringing the total to 18). Also added are more courses for air racing, and a formation-flying system.

The simulator, for PC-compatibles only, costs £29.99 (new but owners of the original can obtain *Chuck Yeager's Advanced Flight Simulator 2.0* for just £15). Simply send the serial number from the back of the original's reference card to Electronic Arts Customer Services, Langley Business Centre, 11400 Station Road, Langley, near Slough, Berkshire SL1 1TF. ☎ 0753 48442.

All major graphics modes—including Hercules, VGA and Tandy—are supported.



Join the club: you'll have to if you want to get hold of *Myth*, the latest adventure from Magnus Scrolls. For *Official Secrets*, a society of administrators, has had its specially written—and now they're offering it free to members on all formats except CPC, C64 tape, and Spectrum tape.

Membership, which costs £19.95 per year in Britain and £24.95 per year elsewhere in the EEC, includes six issues of an adventurers' mag, two free games, and handy gimmicks. For further information write to *Official Secrets*, PO Box 607, Watlington OX21 1PB. (C34 screen.)



If first impressions are anything to go by, there could be a new focus on software, besides, a 40-level *Oldcastle* shoot-'em-up, is the first release in new label expansion, and it's available on the Amiga now for £19.99. An ST version should follow mid-May. (Amiga screen.)



What is it about balls anyway? First-Gen International got about scientific with the obsessive detail of *Billiards Simulator* (pictured this issue), and now *Archimedes* is coming in on its own with *3D Pool*—on all formats including VGA, 386, and Archimedes.

You can take your shots from any angle—anywhere around the table, in this uncommonly-kind sim ordered by European pool champion Joe Burghes. It's an Archimedes shot here. But you've missed by the Tinseltown label that ST and Amiga will look identical. Release is set for April 88.

Tengen label launched with Vindicators

Tengen, the Denmark subsidiary created at last year's PC show to produce Atari clone-up conversions, is ready to go with its first product — *Vindicators*, based on the 1-2-man game.

Already released on 16, Amiga and the three major 8-bit formats, *Vindicators* works strategy with action and features a virtually unique "lay-in" option — allowing a second player to join in the space fighting at any point. A PC version will follow.

Written by Console Computer Systems (a localised Danish branch of The Fall), it's the first game on the Tengen label. And at least four more are promised by the end of 1990, when the contract begins. Definitely among them will be *APB*, *System*, *Dragon Spirit* and *Tombin*.



First of many from Tengen: *Vindicators*



Bubbling over: Denmark's Dennis Wheatley (left) and Mark Strachan celebrate the Tengen launch

A whole new ball game



Imagine a game of football where the balls divide, go off in any curving direction, and appear everywhere. All at the speed of light... and you're back Ballistic, the 16-bit game from Amiga/Amiga/Amiga's first merchants: Psygnosis.

And a wide range of options for you customize the game to your own abilities. If it doesn't take a while to exhaust this great ball of fun, Ballistic is available now for 16-bit and Amiga.

Feeling blue?

Oh! Cold are — because as all for their Amiga World comp to last month's TSM was pointed to the winter blues.

You should see it in the correct glorious. Both times this month — but just to see the previous game.

See earlier again, let's reiterate that it's a collection of five arcade titles (Great Fighter, Side Arms, Ninja Commando, Road Runner and 1941). It's available on tape and disk for the big show 16-bit.

Press Run to play



More that's good to do: *The Running Man* (16-bit version)

Granada's magnum opus *Thunderbirds* and *The Running Man* are now complete, in our conversion show. *Thunderbirds*, based on the cult TV science-fiction puppet show, is dubbed a "low-way scrolling role-playing graphic adventure", which suggests there's plenty to go to go with as you take the Treasury family through a series of death-defying escapades.

And *The Running Man* — a horror video the Arnold Schwarzenegger movie, was the original. Stephen King novel which is barely remember — join a low-mall hero against a series of savage man-eating knife factories.

Both are available for all major formats, 8-bit and 16-bit, watch for reviews in the next feature.

Thanks to the Amiga/Amiga/Amiga (Amiga) team



It is very annoying ...

... as that headlines like that. But that's nothing compared with what you'll find playing *McBusiness*. Bruce's daughter's been kidnapped in such a way, that it's pitched as a simply but addictive game (ain't they all?) which just won't let you rest. *McBusiness*, fighting monstrous monsters and destroying cities sounds like a good way to let off steam. (Can we stress, this available for Spectrum, ST and PC.)



SEUCK slowly

Major criticism on Quake's short-sharp construction kit (Preview), GAMING have pushed the release date back. Targeted Amiga version in March or April, and ST in the summer.

Meanwhile, Quake's have

warned that pirated copies of SEUCK found in Europe do not contain many important features, such as creating complete games. They also claim the pirate versions have a dangerous virus - you get what you don't pay for.

American pie in the sky?

London shop Software Circus has imported a new flight simulation from America's Breakout - *Driftlight*. This adventure, set 1944, the PC game includes over 40 missions in a wide variety of settings, three different players, an aircraft carrier, and a fully digitised rendering of the state of California.

Want action from the sea and straps, too? *Driftlight* will suffer contact Software Circus, The Place on Oxford Street, 140 Oxford Street, London W1D 4DP. Tel: (01) 479-2811, 7028 and 054 are required. There'll be a review next issue.



Sega special

Virgin Mastertronic have four great-looking games lined up for the 8-bit Sega...

■ Vigilante

Beat 'em-up action on the mean streets

■ Altered Beast

Become a Japanese werewolf in Britain



■ Time Soldiers

More nostalgia combat

■ California Games

The famous sports compilation

■ Activision action on Amiga

■ R-Type

and all aliens



■ SDI Real-life star wars

■ Afterburner Top-speed flight



TGM looks at vigorous hand movement
New for Nintendo

When it's a joyride, not a joyride?
When it's a joyride, not a joyride?
When it's a joyride, not a joyride?
When it's a joyride, not a joyride?

Julie Taymor's *Pendemonium* is a great example. Actually two, three lefts and rights and watch your camera channels do the same. The sense of freedom is exhilarating — you really feel in control of what's going on, like you're a part of it.

The 11 Force was designed by Dave Capper, formerly of Mattel Toys, a former manufacturer of a joystick. "It begins, 'We created a device that put out a, let's call it a force field that removes joint pressure and what you're doing,'" Capper simulates as he says, "it's like, 'We have created our own...'"

Cappetti's creation even includes events for people who need the feeling of grasping something while they play. There's a set of firing handles that work just fine without losing the grip to victims to the world of constitutional psychiatry. Also included is a 7-bar for scoring games - in the home and on the imposing black, thumb-like device, about the size of a small animal case.

to existing regulations on operations in the study countries, and will retain the above 90% ratio.

Copper left Island before he designed the 11 Force, but the giant toy store is also making an exciting entry into Minnesota peripherals — with the Moose Game.

The Power Glove looks like something a space alien would wear, rather than its small buttons and controls.



Heavy lifting with real people? Inflatable Crouches have just the thing—the C79-99 Crouse capitol model for PT, complete with up movement, push/pull movement, low resistance, and a side handle to control speed.

The usually-rough yachts are changed into the subtle harbors of the computer, and plugs in like a special just-birthed mouse and so on.

Composite software include Flight Simulator I, Gemini, The Jet, Twin Jet, Falcon AE, F-14 Stealth Fighter, Check Engine, Advanced Flight Trainer and Jetpack 3D. Available on Windows 95/98/NT/2000/ME/XP.

Wellington Street, The Plaza
on Oxford Road, 100-102 Oxford
London WC2A 0HP ☎ (01) 236-
0833

Apparently the first of many Quick Joy sticks, it's available from retailers at the Kwik Marketing, 51 Tottenham Court Road, London W1P 0LP (01753 453 5713 or 01753 453 5700).



How's your...? H. House... (How's your...?)

PC 104

The present study and other epidemiologic studies indicate that the risk of Peritoneal D and/or HD is increased by several conditions:

Boyle features dual 100-lb. stainless steel doors of construction. One even 'floats' and is spring-pressed; the other locks in the

—that the 6.7% increase in the number of shared-care patients. The New England Journal of Medicine

Keats also will integrate and centralize peripherals around the PC. The Twin Port interface compatible with all PC models, even G21-49, but there's a few quibbles about the design and

Keywords: Great Britain; human factors; occupational safety and health; safety climate; safety culture; safety management; safety training; safety behavior

good about other players' backs. I think the
 players have been very good about that.

Lawson, trapped in the massive action — gash held of an imaginary shooting wheel in Red Kane and up down the road, in matter. He jumps his mindless on his own.

Setting up requires entering a game code into the Game's numeric pad. The manual also shows how to rearrange games as they read to you, own, personalized hard and floppy disks.

And since all Nintendo cartridges are compatible with the game, by playing some of these old games, the newbies can thoroughly master the controls, too, and be ready to go.

Things will get even more hands-on when Microsoft releases their Xbox Gaming series. These games will display an uncanny hand that exists in your door, for the kind of action a psychic

Available in two sizes (the right-hand only), the Ferrari Glove should appear in America by late summer, with a small line advance, then, in late fall.



Abstract: The purpose of this study was to determine the effect of a 12-week training program on the physical fitness of 12-year-old children. The study was conducted in a primary school in the city of Ankara, Turkey. The study group consisted of 20 children (10 boys and 10 girls) who were randomly selected from the school. The children were divided into two groups: a control group and an experimental group. The control group did not participate in any physical activity during the study period. The experimental group participated in a 12-week training program that included aerobic, strength, and flexibility exercises. The physical fitness of the children was measured at the beginning and at the end of the study period. The results of the study showed that the experimental group had significantly higher levels of physical fitness than the control group at the end of the study period. The study suggests that a 12-week training program can improve the physical fitness of 12-year-old children.

A tale of two Ataris

Lawsuit update and exclusive interview . . .

by Marshall M. Kinschick
in New York

Everybody's curious about Atari these days. Talk of lawsuits against Nintendo, new gaming machines—does anyone know what's going on? First, let's get our computers straight. Tengen, a former licensee of the Nintendo Entertainment System, is a division of East Games, who produce the arcade games. They are not a part of the Atari Corporation that makes the AT in any of the gaming systems, and they don't make any software for those systems either.

Now Tengen are involved in a lawsuit with Nintendo (TC000114). Since Nintendo control all the licenses to produce games for their console, it means that the big N decides who can develop, when, and in what quantity. Besides, they manufacture the cartridges and ship them to the companies who will sell them—Nintendo lodge their bets by having a special chip in the system that locks out any cartridge not officially sanctioned.

Tengen took umbrage at this, and decided to make cartridges that would bypass the chip—thus no longer paying Nintendo and circumventing the status quo. Tengen cited a US law called the Antitrust Act, which prevents a company from creating a monopoly and excluding free trade.

The law was first used to break the railroad monopoly, and it worked back then—that they didn't have the big N to contend with, and now Nintendo are concentrating Tengen. (Don't hold your breath on this one, because it might take one year before the

smoke clears—which is how long it took Polaroid to take Kodak out of the instant-print and camera market).

The moral out on the street here is that a long and bloody legal battle lies ahead. The two parties might come to a compromise, but when an edge will be the results is completely up in the air.

Practical Katz

It may seem a foreboding, but none of the above has anything to do with the Atari Corporation (though Atari have participated in a few lawsuits themselves . . .). Tengen caught Michael Katz, President of Atari's Gaming Division, during the recent New York Toy Fair.

In between his TV interviews, he allowed himself to us the time that Nintendo gave to the video game industry in 1989. But Katz remarks that Nintendo is definitely not the only game in town, and that a whole new generation of young game fans are looking toward Atari.

"We came out with 50-60 titles during '81 and '84," he mentions, "and there will be over 50 games for our 2600, 7800, and XE systems this year. Launching plans of four new titles; Katz claimingly manages to avoid mentioning himself when asked about the rumors of a mysterious new games machine, but he does stress that it will have great graphics and sound, and should appear in the year before the end of 1989.

Forward a bit more, he mentions that



Katz, sitting at AT console

Smarty-pants

Atari Corporation, the TV manufacturers, decided the first ever "pocket PC," a device's "black computer" show in Minneapolis. It was the Atari XE-compatible called the Peko Pocket PC has more the size and feel to the world computers, and it could also do things beyond the gaming like handling your text or a machine.

It will not be 8-bit technology, not compatible with any of the existing systems. Could this be the keyboard-less ST console (PS00004)?

■ Finally, one developer's bed shared by all the memory—a bit of a hidden feature on the new 2600 games. They've created designed with a hardware pause which can be used by flipping the switch from on/off to black-and-white. Remember, you found it here first.

■ Marshall M. Kinschick is IGNITE's co-ordinator.

Mirrorsoft trumpet CD-ROM



"Defender of The Crown would be fantastic with audio," says Mirrorsoft Chairman Jim MacKinnon, already looking beyond his firm's CD-ROM version of Defender Of The Crown—the first game ever on the new medium.

And it's only audio that they've added to Cinesound's software, in an experiment to show what CD-quality music and voice effects can add to a game.

"We can now start thinking about having help files which are spoken," observes MacKinnon—let's just hope they're not in the various Australian/New Zealand/real England accents that language experts said Defender Of The Crown should use for authentic medieval voices.

Originally released in 1984, Defender Of The Crown will appear on CD-ROM for PC-compatibles in a tiny run of just 500 copies to test the waters.

■ CD-ROM: a step to the wrong direction? For Controversy, page 112.

Another fine UMS

US Gold have lost a fight for the rights to UMS II—and now they're saying MicroProse paid too much for it.

US Gold's USI label announced recently that they'd be publishing the sequel to Bantek's strange classic UMS (PC00044), even though they hadn't actually signed a contract.

According to USI's Bob Malin, a verbal agreement had been made—had then Intergraph's Development, the game's US programmer, "didn't want to underwrite all the costs and conditions".

And Malin told TCOM that after a contract was posted to Intergraph's US agent, "we got a letter saying another company was offering more money, and it became an auction situation. But we'd offered what we thought it was worth."

Now MicroProse will publish UMS II. Rumors at this small 16-bit machine (including Apple II GS and IIcx) in August.

Changing point of view: The Bantek originally didn't want Apple Computer's MicroProse, judging by their steadily outgrowing line machines to the manufacturer's taste.

For George Bantek, Paul McCann, Bantek and the editor of the line Apple's are getting, the really upstart, man, now Apple Computer's one of the half-sister that existed—they're saying it's the mainline of their company Apple Computer Inc.

The dispute, which involving both parties' ownership to some, goes particularly now Apple Computer's of the steps to a 16-bit machine. Presumably the Bantek will negotiate this right and hopes to follow the most product had been released by them.

Indeed, the Bantek said that Apple Computer had begun almost two years ago on an attempt to build 16-bit.

Meanwhile, as Apple's approach, a 16-bit machine, they're thinking not apparently launching a CD-ROM, but in the exclusive use of the same. Gary and the Producers, because they produce a format and work.

THE RISE

A new generation of Japanese consoles is coming to life, with both Nintendo and Sega determined that their 16-bit offspring will survive. TGM reports on the beginning of an era.

Nintendo: heir to an empire

by Anthony Kanagar

At last, after months of speculation and rumours, Nintendo's 16-bit Super Famicom (Family Computer) has made its appearance. On November 21 last year, Nintendo showed the machine to magazines, companies and software firms, and they gazed upon the promised computer.

The provisional release date in Japan is July, but it could be delayed till September or October. A UK release date of 1990 has been mentioned, but this seems very much up in the air - Nintendo have to protect their own Japanese market from Sega's Mega Drive and NEC's PC Engine before they start exporting abroad Europe.

The price has not yet been decided, either. Though Nintendo's aim must be to undercut the Mega Drive, which costs for £1,000 (yes, £1000), that had for a machine which can score claims equal, on the merits of its hardware, not look out of place with a 40,000-50,000 yen price tag (£140-£240). And looking at its hardware, it's not surprising to see why.

Superficially it could almost make an Amiga look like a tin right graphical modes combining different resolutions and number of colours onscreen. The maximum resolution is a hefty 1024x1024 - that's with only 16 colours onscreen, but the total pixels is 12,768, with up to 256 colours in low resolutions.

In range of built-in utilities includes features so quick that a camera's shutter speed of 1/100 second produces a very blurred picture, horizontal and vertical stretch, scrolling of a portion of the screen only, fade-ins and fade-outs, line layer scrolling, windows and more.

Whereas the 8-bit Nintendo (also called Famicom) had a maximum sprite size of 8x8, the Super Famicom has a maximum of 16x16 - and there can be up to 32 on one line without glitches, compared to just eight on the Famicom outputs. The maximum number of sprites onscreen is 325, Nintendo 64.

In the 8-bit Nintendo is contained in the graphics field - but how badly is it broken in sound?

The Super Famicom can digitise sound and play eight sounds simultaneously. Once sounds are digitised, it can replay them with echo, reverb and countless other weird and wonderful things which would make it ideal for use with music software. The machine also can 'position' sound in any of 16 different places, and there's an 8-pin socket with volume controls for the Mega Drive.

In short, in the mid-to-high departments, the Super Famicom is possibly even more impressive than the PC Engine, CD-ROM or not.

Winning games

Two of the four games released simultaneously with the machine - Super

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Mario Bros and 4 and Legend of Zelda - are almost guaranteed successes, because the originals were phenomenal hits on the 8-bit Nintendo.

But the sample game shown at the 16-bit machine's launch was *Dragon Fly*, a flight simulation. To give an example of how impressive it was, it was said to have surpassed the PC 8-bit version's flight simulator 2.

The new Famicom itself is bigger than its 8-bit elder brother in every dimension: the cartridge slot, the controller size and the machine size itself. The controller is the rocky shape, but with six run buttons, four on the flat of the controller, and two on top where the fingers usually fit.

As Sega are doing with the Mega Drive, Nintendo are launching a Famicom adaptor, which will render compatible range of 8-bit titles on the 16-bit console. (But whether this will sell, as there are already millions of homes possessing a basic Famicom, has yet to be seen.)

All in all, the Nintendo Super Famicom looks set to bury Sega again, but probably not as deep as the 8-bit Nintendo did. The machine is very impressive obviously, but its late arrival may not give it the dominance in the 16-bit field that Nintendo enjoyed with 8-bit. And as always only the public, time, and TGM will tell.

■ Anthony Kanagar keeps an eye on Japan for TGM

Super sound and vision - the Nintendo Super Famicom



SING SONS

Sega: here now

by Neil Harrison
in Tokyo

Atari paved the way in the computer game market in the late Seventies with their VIC-20 system, but since then one console has reigned supreme in the highly lucrative world of Minisets. The domination of this 300-year-old company's 8-bit Famicom in Japan is only too easy to see, as huge numbers of gamers have an equally large number of customers to purchase them.

Backed up by innovative add-ons, the Minisets has dominated—but the one black mark against it is the new-age technology used internally. The machine uses a similar 8-bit processor to the twenty-old C64 (first built in 1981), and the supporting chips are equally primitive.

Indeed, the latest technology available has yet to be put to good use by a dedicated games-computer—with one exception. Sega's new console, the Mega Drive, uses a powerful combination of 16-bit and 280 16-bit processors.

Unlike the 16-bit Minisets it is already available in Japan, could easily be imported, and looks set for a UK launch in 1989 or 1990 anyway—though Sega in Japan are trying nothing.

Smarter than the average

Available only since late 1988 in Japan, the Mega Drive has a sleek and expensive look—it's a much prettier machine than the Minisets of Sega's earlier Master System.

The machine is modelled out of textured black plastic, with a cartridge slot surrounded by a silver circular 'hubble' which gives it the look of a portable CD player—probably a move to draw sales away from the popular PC Engine's CD-ROM player.

The light, rather shiny-looking console has a sliding control for volume control through a headphone socket, a mute button and a mechanical cartridge lock that doubles as the power switch.

The one hand controller that comes with the machine is the more standard fat controller found with all the Japanese consoles. There's a rocker pad, three triggers (two buttons) and a start/reset button. Having said so, vigorous playing, it makes clapping easy to reach and fast.

And it's plugged in via an apparently standard 8-type connector, which makes connecting existing



peripherals and others add onto a parallel 8-pin.

A second controller can be bought separately and plugged in; many gamers have an automatic sensor that only gives the opportunity for two-player games when the second controller is there.

Output to the TV is through separate audio and video leads, and of course the picture is NTSC (Japan's display standard)—so if an export is sold in the UK it will need an adapter like the one supplied with most imports.

Handheld coin-ops

I played three games—*Altered Beast*, *Super Thunder Blade* and *Space Harrier*. They're all arcade conversions on

Unlabeled from: Sega's Mega Drive

耳又子

the Mega label, they were developed at the same time as the console, and they are its first software ever.

They're on cartridge format, and don't come with (in fact, though it's worrying that the cartridge could be inserted the wrong way into the machine—and the power turned on, the mechanism lock merely prevents the cartridge from being removed during play.)

The *Altered Beast* cartridge hasn't been seen in Britain much, though Microscopic already have the rights for a conversion. It's a side-scrolling action beat-'em-up—and there's rum up where the player's hunch main character walks on and splits through several literary levels.

The game starts with a nice example of the speech capabilities of the

machine — the words "the first your power" would make the player out of his chair if they didn't react as much like *Ultima* (p.62).

As the player picks up items, his stats get visibly stronger and more muddy. All he eventually changes into a lion (a werewolf on the first level, a weretiger on the second, etc).

First-of-its-kind master include a huge maze that starts out as a generic labyrinth checking his head at you — after doing a *Pendragon* "version" to you down? This is more intense and very intense to the arcade original.

On the second level there's a huge platformer that opens to reveal a beautiful spinning maze that shifts out across the screen, and monster creatures appear in the third level's rocky cavern, which makes *Exorcist* (and all 3-D) making to discuss the player behind rock etc.

There's also a two-player option.

Great space race

Star Master II, quite similar to the original, uses a beautifully smooth chequered floor and very realistic 3-D effect (as good as the arcade ever was, the rapidly-spinning targets are impressive too, especially the end-of-level bonuses, though the player's main character could have done with a few more animations like many others in Japanese games. The form and detail are there, but a few "beams" are missing, giving jerky effects).

The realisation of rotating between pillars has to be believed — screenshots don't do justice to the smoothness and speed of the animation, which gives an illusion of the *Star Master*'s real power.

Super Thunder Blade is the most disappointing of the lot. It should have been called *Hyper Thunder Blade* (it's *Thunder Blade*), since all it gets credit to have done is revamped the set-up with a new scenario and slightly sub-standard graphics.

To be fair, the controls are fine, but the wobbly buildings and dazed eyes look down. It's quite frustratingly hard, with invisible enemies coming from nowhere to knock you out of the sky.

The top-of-the-line presentation of all three games — music, option screen, etc — looks well on other Mega Drive software, which will include *Power-Drive* and a rather subtle but very impressive TV-advertised game called *Star Kid*. It's a game between *Wonder Boy* and *Super Mario Bros*.

The reaction of other Japanese developers was positive, with even Namco — a major developer of profitable Nintendo software — saying they felt it was powerful and should go for the wealth of backing of good games. Mind you, their future with Nintendo has looked shaky every since Namco's return last year. Atari Games Corp. said Nintendo has a 500 million (US\$400,000) deal.

It wouldn't be surprising to see developers looking to get a kick-in on the Mega Drive, but it will need to get established quickly before 16-bit Nintendo arrives. This will be a first, literally.

■ *Phil Harrison* is a freelance games designer currently working for Midland Design Developments. His last work on homebrew titles in *Home* and *Home* made and the last piece of reviewing just made you get given with every word.



Great Japanese: if the PC Engine drops on selling, we could have more like this

Konix software riding high

Seven software houses have already agreed to produce software for the Konix Multi-System, the company says. Electronic Arts, US Gold, Ocean, Microsoft, System 3, Palace, Thalamus, Llamasoft, Logotron, Electronic Arts and Literature all in on the game, and Konix will be making its own software, with an additional one from Amiga at the top.

"I don't want to get in there and start blaring," said Llamasoft's characteristically cautious Jeff Wilson, though a few software houses have expressed doubts — or, more likely, doubts about supporting consoles when they've got so much invested in home computers.

10 games should appear when the console is released in August, and a further 10 by Christmas, all will cost £14.95.

The entire picture shows Konix's hydraulic chair, a Multi-System peripheral, on display at the recent British International Toy & Hobby Fair in Earl's Court, London — while in the back-and-white pic, programmers and software supervisors gather round in Konix's kitchen to try *Halfway* (the chair, *Power* of the console was first reported by TCM last column).

■ A couple of reports in last week's report may have confused the issue of the Multi-System's price. It will retail for £199.



Networked Segas?

Hidden under a sliding cover on the underside of the Mega Drive lies a large gold expansion board. Theory is relevant to this in the manual. But it's probably not for complex networking.

The only information TCM could get was from a retailer in Tokyo, who suggested it was for interactive networking of machines — most likely for Japan's highly popular version *FFIII*.

PC Engine on a victory run

AmigaShare is entering a new 561 PC (single) space from the US distributor Macromedia, according to the firm's manager Andrew Saxon. "I've had about 100 shops ring me up to be and they all want it, but I've been turning them down for the time being. I'm competing from Apple now," he says.

Comparable the chair below, the Macromedia console's Tatum/Court Road, California, is (in Japan and August), under the hood, are now using the paperback-sized Japanese console which TCM first revealed last year.

But the British software's long dog is not up with Sega, where the PC Engine and to 14 software titles are among the most popular console purchases. That may be partly explained by the low price — Japanese shops will sell it for £10 to £15, while Macromedia's price is £24.95 for the machine plus £19.95 for a TV interface.

There seems little hope of this price coming down, because 561's have to pay to all the English in Britain themselves. In America there are no taxes, making this console.

WIN A ROMAN HOLIDAY WITH CRL AND 'I LUDICRUS'

A l roads lead to Rome, but unless you happen to live in Italy it can be a pretty long hitch. So CRL have recreated the splendour that was Rome – or at least the idiosyncrasy that was its gladiators – in the secondplay sport *I Ludicrus*. Now available on ST and soon to be on Amiga and E-Sets, it's reviewed this issue.

But for Italophiles who'd like to get a little closer to the real thing, CRL are also offering a trip to Rome for two worth approximately £500, plus ten copies of the game for runners-up!

The trip includes a return flight to Italy's historic capital – an amazing city where the well-preserved monuments of ancient Rome form a backdrop to the hustle and bustle of modern cosmopolitan life – and two nights in a hotel. (You'll fly out Friday afternoon and return on Sunday, when you win the comp, CRL will be in touch to fix the exact dates.)

And the good news is that to conquer Rome you don't have to go to so much trouble as the Gauls. And answer our five Roman questions, send them in by the closing date, and your name goes into the prize draw . . .

- 1) What is the name of the river running through central Rome?
- 2) Which twins founded Rome, according to myth?
- 3) Where in Rome does the Pope live?
- 4) Ancient Romans occasionally fed Christians to what animal?

- 5) A Frank Sinatra detective character had the surname 'Rome'. What was his first name?

Send your answers in a postcard or the back of a sealed envelope to **AM I LUDICRUS OR DID I WIN? COMP, TGM, PO BOX 30, LUDLOW, SHROPSHIRE SY8 1DS** to arrive by April 20. Usual rules apply and on the contents page apply.



The gods must be made gladiators in CRL's *I Ludicrus*. ST screenshot reveals this layout

Overseas readers please note: the flight included in the first prize draw has taken form its major airport in the British Isles to Continental Europe. Spectators from Rome are welcome to enter this competition if they enjoy sitting around in airport lounges without getting anywhere.

AND THERE'S MORE . . .

To help the first-prize winner find their way through the streets, swarming streets and ancient alleys of Rome, TGM is throwing in a free copy of the magnificent Insight City Guide to Rome.

Recently published in full colour by Harvill Columbo, it looks at the old and the new side by side, taking you through each area and aspect of Roman life – even the most beautiful and stylish McDonalds in the world!

And a supplement at the end of the ST page book gives practical details on life, food and entertainment in the great city.



LEFT TO HIS OWN DEVICES

Micro music doesn't stop at the MIDI port, as Robin Hancock knows well. For Hancock, a top-engineer at recording studio Sam West, using home computers as well as state-of-the-art music tech for work like his recent Pat Sharp Boys remix, Robin Candy reports on the man and the machines.

It's easy to plot the rise of computers in the music industry. The increase in disco and electronic records over the last ten years is attributable to synthesizers and sequencers with their own micro-processors. But, perhaps the most important use of computers in the music industry is in recording and mixing.

In 1983, Trevor Horn and Jeff Gerson transformed Island Records' Raging Street Studios into Sam West - now regarded as one of the world's top recording studios. Frankie Goes To Hollywood, Bros, Inner Circle and the Pat Sharp Boys are among the more chart-topping acts that have recorded there. In fact, Sam West houses four studios in one complex.

Studio 1, with its large studio area, is where Band Aid recorded *Oo They Know It's Christmas?*

As is often the case in a high-profile industry, it's the people behind the scenes - in this case the producers and engineers - who play a crucial role in that studio, often artists enter a recording studio, their future success depends very much on the producer and the engineer.

An artist can get very involved with his own material, and may not see which parts of a song do and don't work. The producer provides an outside opinion and tries to guide the music in what he feels is the right direction.

Meanwhile, an engineer's job can be divided into two categories:

recording and mixing a song. In the recording process, his job is to control sound from the instruments to tape in the best way he can. The essence of mixing is to get the sound levels between each track properly balanced. An artist is very dependent on the engineer during mixing, since the final sound is often determined by how the engineer sees the song working.

Robin Hancock is one of Sam's in-house engineers. His engineering credits include Simple Minds, Act and Marmalade, one of his most recent pieces was the Pat Sharp Boys' 12-inch disco remix of *Left To My Own Devices*. An expert on the Synclavier and Fairlight systems, Hancock works with computers every day.

Most pop music has some programmed aspects to it - even if it has live drums, they're probably played to a stick generated by a computer. Computers increase the options available to the producer and engineer. For example, a drummer could go out and play his part. Other than tell him which bits to do again, you have very

little control over that part of a song. With programmed drum sequences you're going through every single snare beat and alter its velocity. You can make things sound incredibly real. However, the demand of programming is that it takes so long.

Voice to vinyl

The time it takes to record a song can vary considerably. A few lines get into the studio area and sets up in separate booths, which are often designed with particular acoustics in mind. The engineer then decides which microphones are to be used and he's assistant sets it all up. The band then performs the song which they've—clearly—rehearsed.

This gives the producer and engineer a guide to what the song sounds like. Then the vocals and/or instrument will be recorded individually.

A band that can play well may take a day or two to record the main elements of a song," explains MacCook, "while a song where the producer has

to create the backing track himself using session musicians, can take months. *Sliver* by The Waiters took nine months to complete, but that was originally intended to be a single and was gradually worked into an album.

Home computers have made a big difference to recording studios. We actually use PCs to control some of the sequencers and drum machines.

A band can complete a lot of their pre-production work before entering the studio, particularly if a lot of their stuff is sequenced. This can control all the sequencers from one time source and our time line is always ready to record. All you have to do then is overdub any live material such as the vocals. Studio time costs money, so it makes sense to get as much of your song as possible completed before entering the studio.

All mixing (also recording is controlled from the studio control room). Probably the most important place of equipment here is the mixing desk, which usually consists of a series of 24 or 48 faders which control the volume levels of each individual track,

above each of these is an additional set of controls including equalization, noise reduction, and filter controls.

Using the studio equipment, we can improve the quality of even quite poorly-recorded sound. We can improve a singer's voice extensively. For instance, deessers (pronounced 'deez-ers') remove hissing from a voice, the de-stutterer removes bits of breaks of singing. We then compile the final files from each take onto another track.

"You have to make sure that all levels are just right, especially with CD, where you can easily hear everything going on. We use different monitor systems to simulate a car stereo or a home hi-fi. When we're doing a 7-inch single mix, we quite often listen to it on a mono system afterwards (I've missed a lot of things, I get used to it) or we usually play it again, so it's kind of critical that they come across well on radio.

"If we're doing a 12-inch mix, we try to simulate a nightclub or disco where there's a decent sound system, but we don't use high-fidelity speakers.

■ SOUND LOGIC

Secrets of the mixing desk

at the heart of the recording and mixing process is the mixing desk. Here, itself, the most of the world's top recording studios, use Solid State Logic's Mixers with their built-in studio functions and computers for recording and mixing.

Each part of a song, such as the bass line or the voice drums, is recorded onto tape in a separate track. These tracks are then summed on top of each other to create the finished song.

The mixing console allows the engineer to move faders and controls, and thus alter many aspects of each track—frequency dynamics, echo and volume. The bulk of the mixing desk is taken up

with these controls, but though the desk looks daunting, it's designed for ease of use.

A fader can be set to any of three mix stations. When it's set to 'solo' the studio computer records the engineer's own movements of the fader and all the controls associated with it.

If the engineer is completely unhappy with the mix it can be stopped, and the computer will set the fader back and each of the engineer is ready to try again. But if there are just a few mistakes, the engineer can let the fader back and move those parts of the mix which are wrong.

Without the computer to record the engineer's fader movements, all the faders would have been moved for when the engineer was ready to commit the mix to tape. And with 48 tracks this would require several people around the desk at the same time, synchronising their move-

ments—making errors highly likely.

In 'trim' mode, previously stored fader movements are updated by moving the fader to trim their previous value either upward or downward. If the fader isn't moved, the previous movements are left unaltered. The fader mode to 'solo' has a fader is used to record a track, but the computer doesn't record its movements.

Computer power

The Solid State Logic Studio Computer increases the flexibility of the mixing console. The computer command module consists of a 386MHz keyboard along with 32 specialist keys with a single word engraved on each—vocals, mix and solos. The engineer can conversationally tell the computer what to do, with just a few touch keys.

The Primary Computer controls the computer desk machine, providing real location facilities. All songs are stored on tape with a start and finish time. The computer can then be instructed to do to, mix or mix) between any locations by keying in the timecodes. A song can be further divided into sections, which the engineer can cycle while he performs the mix.

When a song is mixed by a 12-track, several options to present in the primary area of the board, the engineer, using the computer, assigns the tracks around, repeating some sections and arranging the song into a different order. In some cases additional material is added to the mix: this is called a drop-in. The engineer specifies the start and finish part of the drop-in, and the computer patches in an effect between those times.

One of the main features of the Solid State Logic mixing desks is the 'Solo' level monitor. The computer has a solo control in the desk and sends this voltage in the song's Setup List.

When the piece is next entered on the engineer can call up the Setup List. The computer then scans the desk and compares the settings to those in the Setup List. The results are shown on the monitor. The engineer can now reconfigure the desk to the settings used in the original song.





the Dats On our speakers drives us as you drive them quite hard, which gives you a good indication of an average fan's."

Producers and engineers must draw inspiration from somewhere. Sometimes the music itself can inspire an unexpected idea. Sometimes the combination of band, producer and engineer is very productive, but the industry is noted for its copycats.

Hancock explains: "I listen to a lot of music. Whatever your background is in the business, you have to be aware of what's going on in the music scene. I don't listen to other people's music specifically for ideas, but sometimes I listen and think 'yeah that's good' and rush home and put it down or sing it into a tape recorder."

But there's such a cult of plagiarism going on, particularly in pop music. "Black, Arken and Mahanara are, in a way, the worst for that. They are quite happy to rip off other people's ideas."

"Sampling hasn't helped. For instance, Cameo came out with the famous 'Glamorous' (first) and everyone goes and samples it and uses it in their own track. I think a lot of people are abusing what sampling does to sound. Continually shifting the sample around between devices changes the quality of the sound. There are a lot of sounds used which are badly edited."

"Knowing what to look for in a sample used to be the province of Parliament and Run-DMC engineers. But good-quality samples are now available at relatively low prices. So you get lots of people without the technical know-how editing samples badly. There are an awful lot of people out there who program in a very amateur style - but I don't know if the people who buy the records actually notice."

Man or machine?

So if the early popularity of high-tech equipment means every Tom, Dick and Harry can be a hit in China, does that spell the end of creativity? Some critics argue that music is now in the hands of computer programmers rather than musicians and has lost its human edge - but Hancock disagrees.

"Music is becoming increasingly producer-oriented. It is moving toward those who are more technically-minded. The great thing about computers is that you can get anybody tapping away on them and once you've qualified it it sounds fine. Computers allow people without a great knowledge of music to be creative, but a lot of music has become stereotyped because some people depend too much on computers."

Live things do sound fantastic. However, it's possible, surely, to incorporate live recordings in sequenced music. Datt's *My Darling Clementine* has a 50-piece orchestra which sounds great. "You can't artificially reproduce the sound of an orchestra, just like you can never produce the sound of a saxophone or a guitar on a synthesizer. On recorded instruments you can have the note on the track, but you can't yet reproduce that."

Computers make the recording and mixing process much easier, but inevitably live musicians are still essential.



VORSPRUNG DURCH MUSIK

Frankfurt, West Germany: ST ruled OK at the recent Frankfurt Music Fair, with products like Steinberg's maturing MAGE operating system helping to extend the power and flexibility of music music even further.

But, as Graham Wayne reports in next month's TQM, despite the ever-growing plethora of software, in modern music packages, they're in grave danger of becoming too standardized and too concerned with pure presentation - leaving the user more confused than ever.

Watch for an exclusive analysis of the Frankfurt fair and the state of music in TQM18, on sale April 20.

FULL WARNING STATUS: CONDITION RED

BLASTEROIDS



SCREENSHOTS FROM THE GAME



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STRAIGHT FROM THE ARCADES COMES BLASTEROIDS.

TENSEN'S CLASSIC MIX OF ONE OR TWO PLAYER ACTION, WITH FULL POWER-UPS, BUMP-STARTS, SHIELDS, DOUBLE-UP AND MORE. THIS IS THE COIN-OP CONVERSION OF 1989.

AND BEWARE - MURDER AWAITS!

COMING SOON FOR COMMODORE AMIGA (£14.99), ATARI ST (£19.99), C64 SPECTRUM, CPC AND MSX DISK (£14.99), CASSETTE (£9.99).

image
works

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OPERATION NEPTUNE



The tranquil surface of the Pacific Ocean belies the battle of wits taking place in the world's last unexplored territory. A perfect hiding-place for a determined enemy or is it? Your jet-bike and technologically advanced bathyscope should help, but there are still the enemy bases to destroy, lines of communication to be knocked out, and the natural predators of the deep just waiting for a tasty snack at the first snail of blood! So check your oxygen supply and dive, dive, dive...

Atari ST, PC, Amiga £84.95

CD-ROM, Amstrad £14.95 (disk), £9.95 (tape)

INFOGRAVES, MITRE HOUSE, ABBEY ROAD, ENFIELD, MIDDLESEX, EN1 2RQ.

INFOGRAVES



The Games machine

REVIEWS

24 ■ POPULOUS

Never since Little Computer People has a game given you so much power over the lives of your, dare I say it, 15-bit sprites. Electronic Arts's Populous gives you more than just a house to control — you have an entire world at your disposal. Play either God or Satan and let the cosmic battle begin. And with 600 levels you'll be playing till Judgement day!



machine

TOP
SCORE

27 ■ ZANY GOLF

Normal golf was never like this! Imagine crazy golf getting ten times crazier where anything can, and does happen. Think soldiers and falling away the holes, then try for a shot at the catchup-leden Hamburger Hole. You'll be putting till dawn.

41 ■ PIPELINE

For puzzle-lovers a game to really drive you round the U-bend! It's as simple as screen-shots can't do it justice, but wait till you load it up and try and stop yourself having one more go. Overload of unsullied and addictive gameplay from Tice as you lay a pipeline within a mindless time limit.

55 ■ RUN THE GAUNTLET

Fast, furious action in this rough and tumble sports simulation from the TV show which Ocean kept quiet about, but now it's out and the TGM team have been running the gauntlet in road races, assault courses and water racing.

AND INTRODUCING...

Ladies and Gentlemen, please give a warm welcome to your very own Star Update! Yes, this month and every month the Star Update will appear for your delight and delectation, signifying the most prestigious platform, a polychromatic package appearing for the first time at a new venue.

STAR UPDATE

58 ■ Super Hang-On

machine

STAR
PLAYER

machine
STAR
UPDATE

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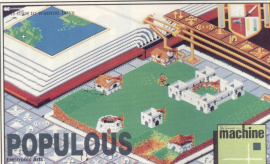
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At the dawn of time, man was nothing but a primitive sprig of a being with little more than a hut to live in and a pocketful of prayers to his name. All seemed blissful down below, but up in the heavens God and the Devil were constantly fighting for supremacy over the other.

Now the time has come for both deities to bring out the big guns in the battle of all time with Earth and the fate of the populations below as the prize.

Populous is played through the extra-dimensional eyes of either the Devil or God, the choice is yours but the objective remains the same — see your followers to all the land of the enemy.

Through the map of the world you create land for your people to establish settlements and fields for cropping.

First your followers are limited to a handful with little more than a solitary hut between them. By divine intervention the landscape can be raised or lowered to create flat lands. As the far-lands expand as your followers spread out, building new huts and becoming more civilized with every step, different levels of progress and strength being shown by different buildings (from wigwags to castles).

Manna makes men

With more people devoting their prayers to you comes an increase in your manna level. Manna is the source of all your strength and the more you have of it the better your chances in battle.

At first generals are limited to little more than the odd movement of the earth, nothing to get your followers bowing down to you, but it's a start. Greater powers allow the casting earthquakes, tsunamis, volcanoes and floods on these down below.

If you're feeling in a nasty mood (in which case, play the

Devil) you can make your leader into a knight. Once created, the psychopath sets off for the nearest enemy settlement and fights until killed. If he has the strength he's high on impossible to control but great fun to watch as he burns and pillages settlements.

When opposing factions come into conflict a short one-on-one battle ensues — the stronger of the two taking over the other's dwelling. Warriors can increase their power by gathering together to form a stronger walker — bigger buildings also help generate more

machine

TOP
SCORE

From all four corners of the Earth comes swirling your projected — feel to touch the Populous game to play leader



powerful walkers.

Populous is played through a magnified view of the world below with all landscape gardening, missile-performing and disaster-inducing conducted directly on the land. The population invariably takes the full brunt of any attack: earthquakes shake settlements to the ground, volcanoes create rocky hills in the midst of dwellings, swamps make life difficult for walkers trying to reassert land.

Big Devils

While you're busy helping with the progress of your own population (and the downfall of the others) your opposite number is doing the same.

The final action is Armageddon in which both sides move toward their respective leaders, combine to form a sole warrior and then fight in a final battle for the earth, making

style jump is made to a harder world — there are 500 in all. Your performance in one world affects how many worlds you jump past. With four types of terrain and an increasingly nasty computer-controlled opponent keeping up the pressure all the way means trying to fight a 500th level God doesn't bear thinking about.

Like most new wave Electronic Arts games, *Populous* can be played with another Amiga coming on-line via modem, or via a local mode is available.

There's something immensely satisfying about *Populous* that stems from watching people walking around the land, going about their own lives, and developing — it's as entertaining as playing to win. Not since Activision's *Little Computer*

VERSION UPDATE

SPACE HARRIER

Elite Systems • Amiga £19.99

SPACE HARRIER predates *Out Run* in the arcades and that's going back quite a few years! Indeed Elite have taken more than their fair share of time over the Amiga version but judging by the final game that time was well spent.

Massively different from the ST version, the full screen is used but the top third of the screen isn't used by any of the graphics. This clever graphic technique creates the illusion of a wider playing area than there actually is and also gives a lot more room to manoeuvre.

The speed of Mr Harrier himself and the aliens, obstacles, guardian aliens and the hell are good with detail and definition but lack the full palette of Amiga colour.

The need for speed is satisfied superbly with rocks, aliens and various creatures hurtling towards the player with all the subtlety and speed of a freight



Refugees from Easter Island attack our jet-setting hero until the crash. Being victorious of stage two

train. The speed and instant playability of the coin-op have at last been transferred to computer superiority, and this attributes alone make the Amiga *Space Harrier* the most careful of the conversions from the coin-op yet.

Fluid movement, fast paced gameplay, a driving soundtrack and all action blasting — what more could you want?

OVERALL 87%
AAVE 87 TOMMY 88%



The knight — the right little warrior — occupies. Perhaps the neighbours can

any find it a keep after taking the

sure you've got more strength than the enemy is a good idea before choosing to risk all in a bloody climax.

If victory is yours a Sentinel

AMIGA
90%

£24.95

The main bulk of the graphic detail is restricted to the window on the world but what there is is full of detail and a charm all of itself. The stylised best of your heart increasing when you do finally together with a simple but highly atmospheric soundtrack greatly enhances an already great game.

People have pixelated characters been the source of so much emotion, and after a while you really do believe in them.

The gameplay may change little with the appearance of different terrain but the cleverly designed skill level system throughout all 500 levels keeps the pressure on. In short *Populous* is addictive beyond belief.

OTHER FORMATS

An ST version is planned
£24.95

See this month's 8899 page for details of how you can win *Populous* with a modem!



This fire-spitting dragon awaits the arrival of Mr Harrier at the end of stage one in what is the best version yet

SPACE HARRIER II - DATA DISK

Amiga: £19.99, Atari ST: £19.99

The *Space Harrier II* data disk contains the other ten levels of the coin-op. True in form to part one *Space Harrier II* is very similar in play but obviously varies in graphics and difficulty level (after all you're playing the later, much harder levels of the coin-op).

"Not since Little Computer People have pixelated characters been the source of so much emotion"

Personally, we prefer Gerbils but a...

ROCK STAR ATE MY HAMSTER

Code Masters

For a change Code Masters opted out of adding "simulator," "plus," "professional" or "advanced" to the title of this, their latest assault on the full-price market. *Rock Star Ate My Hamster* is most definitely one of the funniest games for a long time. It takes you into battle with the gutter press when all you want to do is manage a few crooners.

The objective is to become obscenely rich and famous (so why isn't it called "Guttering Simulator"?), in the back-sitting-long word of show biz. *Rock Star* lets you experience the trials and tribulations of Cecil the

manager and his assistant, Clint.

Start by choosing from one to four rock stars to manage from a roguish gallery of faces. It's up to you to make your group (if you choose two or more perform-

ers, and then it's on with the show.

Ultimately you want to get to the top of the charts. Starting with fifty thousand gold (there are three choices: to practice, play a gg or get some much-needed publicity). The trick is to practice as much as possible, get as much media exposure as you can and the money (as well as sponsorships and record deals) should roll in. On a record deal choose titles of tracks as they're recorded and whether to release an album and/or singles — with these you can also make a name.

Do you have the skill and luck to win lucrative sponsorships and be presented a gold disk or two? With *Rock Star* budding A-listers have a good chance of landing out. Tongue firmly planted in its cheek, its portrayal of the gutter press is

SPECTRUM
74%

£9.99 cash
£12.99 disk

It's easy to see which pop stars *Rock Star* is poking fun at, as the graphics are mean-spirited caricatures of some well-known faces. The screens are varied and colorful, although they repeat after a few hours' play. Sound is surprisingly good with not only FX but a few in-game tunes to simulate potential hit singles.

great. At a budget price *Rock Star* Ate My Hamster would be a must, but still at full price it offers many hours of amusement.

OTHER FORMATS

£9.99 cash and £12.99 disk. In the prices pop pickers will have to pay for other versions of *Rock Star* on Amstrad CPC and C64/128. All formats released mid-March.

"Definitely one of the funniest games for a long time"



Rwon down, five to go in

THE HUMAN KILLING MACHINE

GDI/Capcom

Take a beat-'em-up trip round six of the world's landmarks, indulge yourself in a little local custom at each venue and become the Human Killing Machine. A tad familiar? HKM: superheroes, racist bully boy or just a plain old refreshed version of GDI's earlier title *Street Fighter*?

Voice title for a violent game which takes place — the last mean streets fighting machine on a non-stop tour of Moscow, Amsterdam, Barcelona, a German bar and finally a joint in war-torn Beirut.

Playing on the same old combat moves as most other one-to-one beat-'em-ups, HKM doesn't offer anything inspiring in the fighting department other than some backdrops. There's a Muscovite soldier who deals a nasty blow with his rifle — and his dog's not nice either, in Amsterdam deal with the sadistic

sympathetic Maria and the Dutch version of Tina Tinsal. Helga, title in Barcelona there's Miguel (first name Stan) yanked the bull fighter and his pet bull (bulls, Hans and Frans of Germany throw broken beer glasses at you and so for the fanatic in Beirut...), fortunately you only have to take them on one at a time. It's a reasonable beat-'em-up but doesn't take the aging genre into any new areas, except for the graphics which are brilliantly detailed, and the animation on the massive sprites is a lot special.

SPECTRUM
70%

£8.99 cash
£12.99 disk

The black and white scenery is well designed, to are the large well-structured characters, but masks to authors. Texts on that score, even when accompanied by the left, back, body bag sound FX, hold is a touch repetitive, but still plays well enough to remain addictive.

OTHER FORMATS

C64 and Amstrad versions are available at standard US Gold prices. 16-bits are available at the new, low price of £14.99; though we recommend you compare it to the 16-bit PC++ (Amiga out now) before parting with your cash. Expect all versions to look and play similarly to *Street Fighter*.

"A rehash of *Street Fighter*?"



Putting it around

ZANY GOLF

Electronic Arts

Remember as a kid, going on summer holidays to the seaside? While enjoying the sea, sand and (if you were lucky) sun, the family would get into the holiday spirit by indulging in a game of crazy golf. Dad usually got stuck behind the novelty lighthouse, granny always got a hole-in-one and you'd end up sulking for coming last. Now games designer Will Hanvey has recreated those larky, crazy days of summer for those who'd rather stay indoors.

The beauty of computers is that they can bypass reality to allow wild and wacky, and yes, zany golf holes to be created. Up to four players can tackle the mad nine-hole course, and eventually the mysterious tenth.

A shot is played by clicking on the ball then clicking back the cursor to draw a white dotted line between the feet. The direction of the line indicates the path of the ball, its length the strength of the shot. Releasing the clicker the ball.

Hole one is the traditional windmill, which sets you up with an easy putt if you get the ball between the sails. Things get strange from there on, with a bouncing hamburger guarding hole two, complete with squirting ketchup as a corner post.

Obstacles mar your path

A game of pinball is played as the major part of hole four, the fire baller used to activate flip-flops, with the target a hole at the top of the table. A wiggling-mouse action is used to activate fans on the next hole which influence the ball's path — as do the mouse gyrations when on the magic carpets of hole six. Castle gates and barriers are the next obstacles, then pesky cats who keep moving the eighth hole! The ninth takes place in a spooky castle of generators and gaseotory ready to disintegrate your balls — very nasty. Hole ten is a complete mystery.

You begin with five shots, each hole should be completed within par and for the Sandy Lytes among you, missed shots are carried over from previous holes. Extra shots are awarded for putting within a time limit or by taking a fairly (no comment).

Zany Golf appears to be an innocent little game, and as such may easily be overlooked. This would be a mistake as once the control system is mastered — which doesn't take long — the variety of unusual holes becomes enthralling, particularly when competing against friends.

Though their aren't many holes, lowering your score (twice par) is a great incentive for further goers. Data disks would be a nice idea for the future.

SALE OF
83%

£24.95

Grass and similar plain graphics are highlighted by unusual hole features which are colourful, neatly defined, and well animated — the ketchup bottle in particular is excellent. Scrolling is quite poor and ball movements are occasionally strange, but neither are a real problem and at least a few of the tunes are pleasant enough.

SALE OF
82%

£24.95

Certain colours are different and the playing area is larger, but otherwise the graphics are identical to those of the ST. Using keyboard control is cumbersome and annoyingly slow but the ability to zoom to the hole or ball helps you to judge your shot.



OTHER FORMATS

Wacky Amiga golf should be available very soon, at the same price.

"Once the control system is mastered, the variety of unusual holes becomes enthralling"

Wouldn't it be fantastic to see the control system mastered, the variety of unusual holes becomes enthralling?



Pinball, cats, hamburgers, pinball machines and magic carpets — what more could you want?

Something happened on the way to the forum.

I, LUDICRUS

CRL

Three ya not, CRL, have been busy programming a hack-rem-up with a difference because it casts you in the role of Ludicrous, a hapless fighter throw into an ancient Roman arena to tackle a number of vicious and unlikely opponents.

Armed only with a lonsesh, visor, sword and shield you have to try and take out characters with such unlikely names as Heri Lee, Ben Daggs and Bod Vyer. Each opponent has his or her own tricks to play, and each require different tactics to best. If successful, the player progresses to a bonus round where a fortune can must be contrived.

Roman humour

There's not much you can say about I Ludicrous except that, graphically it looks a treat, with the comical spots well animated, and the backdrop of the arena very pleasing on the eye. What is a great shame is that,

despite all the fancy trimmings there is really very little to the

game at all. As with all beat-em-ups, once the joystick controls have been mastered it's simply a question of learning your opponents weaknesses and exploiting them. Once that's done you've seen the game.

From the opening sequence where Ludicrous falls flat on his face whilst trying to adjust his visor the game positively reeks of tedium. The sprites are extremely well drawn and are animated in true cartoon style—when Ludicrous is pushed backwards his neck stretches backwards as if made out of



Under the noble Roman exterior, I Ludicrous is little more than a tough moment for the typical cartoonist to build his laugh and opponent like this side of the aisle

WIN I, LUDICRUS!

Turn to page 58 for details of how you could win copies of I Ludicrous or, better still, a trip to Rome!

Three balls do not a great game make

BILLIARDS SIMULATOR

One International

Now here's a curious thing. Imagine billiards played with just three balls—white, red and yellow. The objective is to hit both coloured balls with the cue ball in one shot. Steve Coles territory this isn't but then the French always have to be perverse, don't they?

If it sounds boring, it is. But there are more than enough variations to keep at least some interest in the product. Determine cue position by clicking the left mouse button, cue elevation with the right. You can change perspective on the table from two dimensions to three, and determine the rebound effect or gravity of the balls, as well as altering cushion friction, spin and table friction. You can even rotate your shot if you make a pig's ear of it.

Playing against the computer or a human opponent, your

Billiards Simulator is about as interesting as thoughts and crosses, with as much long-term appeal. Alright, so it might teach you something about the trajectory of balls on a billiards table, but is that something you really want to know? Some players may have a fascination for this sort of product, but to many is sheer lack of purpose combined with its singular lack of gameplay will make it grow old some of us quickly.

The gentle 'ball' of ball on ball is either two- or three-dimensional



£9.99

Billiards Simulator is well implemented. The balls glide smoothly and convincingly across the table. Bounced it is limited to the gentle 'roll' of ball on ball. Although it may allow you to pass a relaxing hour or two, it won't be many more than that.



rubber. All on all this is a graphical treat, but its long-term appeal is questionable to all but die-hard hack-rem-up fans.



£19.95

Ludicrous looks very attractive on the ST, making good use of the colour palette—it's just a pity that the beat-em-up is static and unchanging. The sounds are amusing and enhance the atmosphere of the game. The joystick positions can be hard to master at times, and there is a curious delay which can lead to strangely dissociated gameplay on occasions.

OTHER FORMATS

Ludicrous is also available on the Amiga at the £19.95. A full version should be released this summer.

"A graphical treat, but its long-term appeal is questionable"

OTHER VERSIONS

An Amiga version is out at £29.95, with PC soon to follow.

"It might teach you about the trajectory of billiard balls, but is that something you want to know?"

Anything Ryu Ken do I can do better

TIGER ROAD

Capcom/GOI

You've seen the ads — now play the game. But unfortunately, the 8-bit versions of this dramatically-typed Capcom coin-op conversion are let down by dodgy graphics and rather repetitive gameplay. Still, Aniga owners can thank US Gold's GOI division for bringing in a licence that has at least the look and feel of the arcade original.

Set in ancient China (we're beginning to sound like *Armour Alliance* now), *Tiger Road* casts you as martial-arts star Lee Wing, out to rescue kidnapped children from the despicable Ryu Ken Os.

Roaming through the horizontally-scrolling screens — temples, small rooms, outside

scenes — you fight hand with the villain's sword-wielding troops, earning points and (occasionally) weapons or power as they're killed. And using conceal arms weapons, to supplement the one you start out with.

Coin-op fans looking for a



66%

cass: £9.99
disk: £14.99

The backgrounds are often impressive, but distinctive sprites make the action confusing when it's fast and furious. At least the gameplay keeps interest burning for a while — particularly if the drinking in-game music is switched off.

faithful conversion will be disappointed by 8-bit *Tiger Road*, which bears little visual resemblance to its Capcom parent — despite the large number of different screens. Still, it's pretty playable (if a bit too easy), and for the less choosy player it offers a few hours of straightforward Oriental mayhem.

OTHER FORMATS

SN and CPC versions should be out now; watch for TGM's Version Update.

8-bit players can expect to be disappointed by this conversion (pictured right), but at least the main game (image left) has some of the original's star.

"A few hours of straightforward Oriental mayhem"

70%

£19.99

Predictably, the graphics here *are* fairly close to the coin-op's, especially the well-animated and well-drawn character sprites. Atmospheric sound effects add to the action — all it needs is a dose of extra challenge, and it would be a great game.



43%

cass: £9.99
+3 disk: £12.99

No risk of imagining you're in the arcades here — precisely the only use of colour is in horizontal strips across the screen, which makes things confusing and helps the game run more than monochrome would. Jang graphics also let down the gameplay, which in itself is adequate.

Our type of competent space blasting

DARK FUSION

Genesis Graphics

Genesis's Spectrum shoot-'em-up has an immediate sense of familiarity — *Exolon* and the more recent *R-Type* come to mind. But similarity needn't necessarily breed contempt; it's gameplay that counts, and the way that programmers have recently played chess with the limited pieces you have a on a shoot-'em-up board can almost be as interesting as the games themselves.

The Corps of Guardian Warriors are forced to undergo a stringent three-phase test, testing it in armour-plated suits — or flying their ships — through the combat zone. Similarly to *R-Type*, your gun has a power meter and holding down the produces a giant plasma ball. Destroyed alien ships release which provide points, add-on weapons or give extra jump power when collected.

Once inside the combat zone you see three flashing fusion pods, and if you go into either of the first two you're dumped into a spaceship and transferred to the single-screen alien zone. Here, a huge alien pattern for each level attacks you and must be destroyed to return to the combat zone. When both large aliens have been eliminated, you may enter the third pod and the fight zone, a horizontally-scrolling landscape, inhabited

by small aliens. The fusion pod at the core's end takes you to the combat zone of the next level. The elements of the game are well put together, but the difficulty level may have been pitched just too high for many players, with only the most hardened accelerator sticking it out to discover whether testing appeal is good or not. Are you tough enough?

It's time to turn left and run away as a giant green alien walks towards

OTHER FORMATS

Amstrad and C64 are available at £9.99 and £19.99, with ST and Aniga available at £19.99.

78%

£7.99 cass
£12.99 disk

There's more varied play than in *R-Type*. All levels are colourful and without much clash. The variety of weapons to be collected adds an interesting strategic element.

"A shoot-'em-up for real blasters"





VERSION UPDATE

STRIKE FLEET

Electronic Arts • PC [24.95]

LUCASFILM games release this conversion of the C24 modern-day naval game as a sequel to *Phat Regulus*. The latter was comparatively easy, featuring only one vessel to control, but here your problems are much greater with a fleet of ships at your command, and 12 naval missions to complete. These range from protecting civilian tankers in the Gulf to halting a massive Russian invasion force armed with bombers, warships, submarines and anti-ship missiles.

Even in VGA and VGA

Realistic but dull looking modern naval combat in EA's debut

mode, graphics are 3D-defined and colours restricted to military greys. Smart presentation is let down by dull in-game displays.

Only surface changes have been made to the original — two new missions and an extra ship have been added, but no real improvements over the C24 version are present — although the realism, tension and complexity of the 3D-bit counterpart are still there. Unfortunately, the sluggish speed of play on lower-end PCs lets it down.

OVERALL 64%

C64: 10/1000 65%

VERSION UPDATE

SOLDIER OF LIGHT

Acc • Amiga [24.95]

PLANET BATTLES are too easy — just keep going, firing continuously, while space battles are too tough. Collision detection is iffy in places, and the game slows when a lot of characters are on-screen.

Sound and graphics are okay — the theme music

grows on you — but this version should have been an exact replica of the conv-op, and it's way off that.

OVERALL 60%

THOMAS SPECTRUM/Amiga
TOMATO C64 10%
TOMATO ST 10%

VERSION UPDATE

FLYING SHARK

Firebird • Amiga [19.95]

WHY this Amiga conversion should take so long to complete and still look identical to the ST game is mystifying. The premise of a better tune and an EasyHard mode don't explain the delay, maybe it was time-consuming recreating that famous jerry-crawling ST look. Comparisons with the ST are inevitable, but the game

remains just as challenging. The concept is dated but it provides simple, enjoyable and addictive gameplay.

OVERALL 72%

SPECTRUM 10/1000 65%
C64 10/1000 74%
MAG 10/1000 65%
MAG ST 10/1000 65%



Only three Worlds for the 16-bit covering conversion



The winged conversion that gives Firebird a strange rep

Ninja terror hits the streets, roads, sewers...

DRAGON NINJA

Imagine Software

The President's been grabbed by Ninjab! Someone notices and raises the alarm. Enter Dragon Ninja to fight through eight levels and rescue the man. With this much plot you couldn't expect much in the way of subtle gameplay — you'd be right.

Ninjas are out to stop you. They deal out death with razor-sharp swords and handaxes. Female ninjas, killer dogs and real bad end-of-level bosses lessen your chances of surviving. And watch out for multiply-ing ninjas and life bugs.

Some of the coin-op's originality remains in these computer conversions with action taking place in various locations. The 8-bit games are true player only, a little disappointing considering the fun that could have been had with two Dragon Ninjas, but play remains moderately enjoyable.

"Play remains moderately enjoyable"

Top-top terror as the Dragon Ninja takes on adversaries — Spectrums version right. Commodore on the right

61%

**case: £9.95,
disk: £14.95**

Gameplay is relatively easy — even with twice as many ninjas to deal with. Too much monochrome and slow scrolling dulls the presentation, but at least playability hasn't been sacrificed.

47%

**case: £9.95,
disk: £14.95**

Crude sprites lack detail and animation and look around in front of poor-looking backdrops. Collision detection is too precise — making the game far too frustrating to enjoy.

OTHER FORMATS

Two-player ST and Amiga versions, £19.95 and £24.95 respectively, imminent.

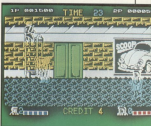


Level one single action with the Man must nothing past in the background — Amiga!

63%

**case: £9.95
disk: £14.95**

A potentially excellent conversion falls down because it's far too easy. Graphically attractive, end-level bosses adopt sinister attack patterns and are easily defeated, 128K machines hold all levels in memory and feature some quiet sampled speech.



VERSION UPDATE

AFTERBURNER

Activision

Amstrad cassette: £9.99, diskette: £14.99

FOLLOWING a mixed reception on other machines, Sega's hypermorphic to coin machines as Amstrad appearance. Both Bunch! the latest, behind the Spectrum version also given the job of making a Tomcat come to alive on the CPC. The resulting product combines the colours and graphic potential of the Amstrad with the playability and speed of the Spectrum.

Unfortunately, despite all of its good points — gameplay is as fast as the coin-op, great sense of speed and high paced action — the player is allowed too many lives. A few hours solid play is all it takes to complete the mission. Occasional obscuring of mis-

Targeting up the gas-pouring Russian-looking flying machine also does — they can't shoot! — and

also and a 360 degree rot which is a bad trick to induce help to increase the overall difficulty, but not sufficiently to redress the balance.

OVERALL 68%

SEGA ST: TOMCAT 47%
C64: TOMCAT 49%
SPECTRUM: TOMCAT 60%



VERSION UPDATE

CALIFORNIA GAMES

Epyx • Amiga: £19.99

IF THERE is a version to beat the supreme programming of the C64 original, this must be it. However, the graphics have only been improved in detail, but not animation, with drag-

pointing added detail. And sound-wise Epyx games have never been strong. Where this game really shines is in playability and the fun spirit of competition.

OVERALL 73%

PC: TQ6500 80%
SPECTRUM: TQ6000 60%
C64: TQ6500 90%



Party of radical action from the masters of the famous Games series. Graphics and sound are outstanding but playability is as good as it gets.

VERSION UPDATE

THE MUNSTERS

Again Again

Amstrad CPC: case £9.99, disk £14.99

WHY critics in this version are so handily designed is a mystery — white, grey and pale green. Characters animate deadfish in front of equally basic backgrounds.

The gameplay is nixed by

clunky bomb-like spells, which move slowly and only appear on-screen one at a time — disabling even small ghosts, dangerous, altogether, weak graphics and cumbersome controls spoil what was only an average game in the first place.

OVERALL 44%

SPECTRUM: TQ6000 60%
486S ET: TQ6500 50%

The pale bloated Munster is as weakly defined as this PC comedy. Bizarre gamesplay, slow moving action, few features and some very rough opponents mean future frustration.

VERSION UPDATE

THE BARD'S TALE 2: THE DESTINY KNIGHT

Interplay/Electronic Arts • PC: £24.95

THE main problem with this product is its age. There are many hours of play but critics are uncompromising: control is a mess of feeble defend or attack, and inter-character communication is impossible. However, for beginners and hungry RPGers there remains

plenty to do.

EGA is used to create effective plotwork and interesting character graphics, although there is occasional unsightly use of colour and crude animation.

OVERALL 68%

Amiga: TQ6000 70%



CAMERA options round:

Party or
Attack
Defend
Use an
Select



VERSION UPDATE

GALACTIC CONQUEROR

Titus • Amstrad CPC: case £9.99, disk £14.99

PC: £24.99

BACKING the 16-bit version's attractive presentation, the CPC game is instantly disadvantaged. EGA mode is apparently supported on the PC, but in practice only the faintest par-

ple, spin, black and white or CGA are viable. The pixelated striping effect is not unattractive, making the speed of the spacecraft equally spectacular, and the sound effects are irritating.

AMSTRAD 48%

PC 58%

Amiga: TQ6000 60%

486S ET: TQ6500 50%

Dancing strings do little to help the dodgy presentation as enemies rarely pose appreciably towards you. It's a shame the game isn't so busy.

Forewarned is forearmed

TECHNOCOP

Gentle Graphics

D In the film *RoboCop* they made a man out of parts and put him to work. In *Techno Cop*, Gentle have made a game out of bits and bobs from other games, but in this case, amid a welter of gore, the finished product doesn't work.

Techno Cop, armed with a powerful gun, riotgun and high-speed vehicle, is out for blood — criminal blood. Wrapped around his arm is a hi-tech computer to help him track down offenders, the more rapidly to get them under his foot of clot.

Two distinct games emerge. The highway chase stage is similar to *Road Runner* but with add-ons less readily available, and with automatic gears driving soon becomes mindless. The building stage has the leaps and gaudy fire of *Blazing Thunder*.

But none of this excuses the gratuitously bloody mayhem which ensues and looks even worse on the 16-bit screens.

"No excuse for gory mayhem"

RECOMMEND 54%

Cassette: £7.99, diskette: £12.99

The monochrome and road perspective work nicely, but the update of vehicle and roadside features is far from perfect.

RECOMMEND 52%

£79.99

Gael roadside perspective is spoiled by simply animated vehicles and the cop walks as if he's about to fall flat on his face. The most satisfying effect comes from blasting thugs into bloody, twitching lumps of diagram. — but is that nice?

RECOMMEND 48%

Cassette: £5.99, diskette: £14.99

Odd perspective and screen update speed ruin the racing section. Small sprites and liberal use of bright red is not pleasing on the eye.

OTHER FORMATS

Atari ST and PC (both £19.99) are imminent.

RECOMMEND 22%

Cassette: £5.99, diskette: £14.99

Outrageous road animation, floppy cars, trees, and explosions, alliterate crash and smoky vehicles that split in half for no other reason than bad programming, weak sound and a tedious multi-load — that's it.

Playing this won't make your day. Attagal before. Attagal undermead.



Let's piece again in Advanced...

SKI SIMULATOR

Codemasters Gold

Sking down a course marked with gates to negotiate against a time limit, trees, huts and rocks makes things far from easy in this bird's-eye-view game. Code Masters call it a simulation!

Anyone hoping for a fast and furious sport simulation will be disappointed — there's no sense of speed and when jumping all you have to do is aim the skier at a greenpost

and hope for the best. Despite the packaging's claim that the game features 'realistic jumps with controllable landings' you have little control over either.

One of two players can race, but as none of the sport's subtleties are reproduced, there's very little for the other player to do apart from steering past hazards. Seven pistes add some variety, but little long-term

appeal.

Advanced Ski Simulator on Code Masters' Gold Label is virtually identical to Professional Ski Simulator released for the Spectrum for £1.99 well over a year ago.

RECOMMEND 50%

£19.95

Stylish alpine scenes set the atmosphere, but the shading technique used to create a sense of depth on the pistes gives the courses an unrealistic, rectangular appearance. Sound effects are poor even though the packaging claims they're sampled.

OTHER FORMATS

No firm plans yet, but expect to see an ST conversion.

Active computer sports enthusiasts will find less to do than sitting in an armchair.

"None of the sport's subtleties are reproduced"



I get a kick out of you

EMLYN HUGHES INTERNATIONAL SOCCER

Audiogenic

Whatever happened to Emlyn Hughes? Fans of the TV presenter's sassy wit, back-slapping and squeals of 'I know it, I know it' are disappointed by the latest series of *A Question Of Sport*, where cricketer Ian 'Oaty the gorilla' Botham replaces our Emlyn. But now Crazy Horse Hughes is back — on the Spectrum and C64, where Audiogenic have updated their classic *International Soccer*, endorsed it by Emlyn, and put his iconic grinning visage on the front.

It's a cross between a sports sim and a football-management game. *Emlyn Hughes International Soccer* allows you not only to physically control your team's players, but also to influence their fortunes as manager by choosing team members and matches (see box headed *Play Options*).

Each match is viewed from the side stands. Controlling one player at a time, you try to get the ball, using a sliding joystick if necessary.

Complex joystick control allows hundreds of different kicks. And though the full range of techniques is tricky to master, it can involve five different heights, three different directions, backstepping, sidestepping and heaving — not all at the same time!

But when you do what the ball is half a pitch away from your player? Changing players can be done manually using the joystick, but it's tricky — especially when the area is crowded. So an option allows you to leave player changes to the computer, which will (telepathically) select what's best. This is recommended on the first few games, at least.

10416
88%

cassette £9.95,
diskette £12.95

The game looks crude, because it's a direct update of the C64 cartridge, *International Soccer*. However, that ancient classic is still noted for its playability, and this new version is significantly more sophisticated. Though speed is limited (an alarm, a gasping sound), the ball moves realistically and the action is fast.

Human factors

The game is tri-a-side, but your squad has 10 members — so you can replace worn-out players with fresh substitutes, or choose the best team for a particular match. Selecting these 10 players is described as 'the most important' strategy element: you choose factors like speed, defensive skills and attacking skills.

But as A.I., these can't give the maximum rating. Thus, it seems pretty easy to construct a 'perfect team', perfect, that is, fit fitness and skill levels deteriorate with injury and fatigue. If fitness goes below 75%, it may be time to call in substitutes, who can be fed back at half-time or by returning to the menu screen when the ball goes out of play.



A.I. looks are footballers, a bit and Coleman's balls — C64 screen

AMERICAN DREAM

Audiogenic toyed with the idea of an American football game before settling on *Emlyn Hughes* as a bigger British dish.

And there was already tough competition in the Superbowl shape of *Commissioner's N Sports Football* (TGM16), which Audiogenic boss Peter Colver admits as 'probably the best sports game anyone has done' — except for one of course.

So after Emlyn, look out for another typically British sports sim from Audiogenic — a 3-D cricket game on 16-bit machines late this summer.

PLAY OPTIONS

A single game of *Emlyn Hughes International Soccer* could contain up to 60 matches, in one of the following forms.

LEAGUE: eight teams all play each other once or twice.

CUP: eight teams play, losers of each match are eliminated, one victor emerges to tug final.

CHAMPIONSHIP: eight teams play as a league, then the top-four play as a cup competition.

ISSUE: includes both league and cup competitions.

Finally one-off matches (or the hellish it can also be arranged).

Two human players can compete — and when a match is played against a computer team, the players can join forces to control a squad.

The overall skill level of matches, on a scale of one to ten, is also set, along with match duration, complexity of controls, and even the colour scheme of the ball, pitch and markings.

Variety shows

The variety within *Emlyn Hughes International Soccer* is truly remarkable, with a total of 43 options covering virtually everything you could want to alter. It's possible to have squads and competitions in progress, and to print out results and details — which all goes to make up a football game with more lasting interest than any other.

The player controls are comprehensive, giving many combinations of height, direction

and strength. And while all these will take a long time to master, the options allow the complexity of controls to be gradually built up, easing the burden till you're ready to tackle a very complete simulation.

10416
85%

cassette £9.95

Quite a small area of scrolling pitch is displayed, which can lead to some confusion in hectic moments — particularly as teams are distinguished only by the stripes on their shirts. But this, like the oversized arrow to indicate the player under control, is easily adjusted to. The stock characters run nicely and amusingly, but the ball movement is less exciting.

One warning: keyboard users could get their fingers in a tangle with the full range of moves!

OTHER FORMATS

GPC (cassette £9.95, diskette £14.95) due around mid-April. Brian, ET and Amiga versions are 'going to happen but not for some months' — it could be late summer', says Audiogenic boss Peter Colver, explaining that it's a long season for the one programming team doing all versions.

"The variety and options are truly remarkable"

Ocean race to success

RUN THE GAUNTLET

Ocean

Combat School was a surprising success, ringing the changes for computer event games, and Run The Gauntlet offers a similar kind of challenge accompanied by different graphic presentation styles for each of the three events: road racing, water racing or the hill assault course—all of which load separately.

For the waterborne race there's hovercraft, speed boats, jet skis, and inflatable boats. These all have their own handling characteristics and also their own particular race courses. For the muddy track races there's two-man buggies, one-man buggies, four-wheel bikes and amphibious six-wheeled vehicles. There are two courses for these machines. And as for the assault courses... it's the same's pony for the two different layouts.

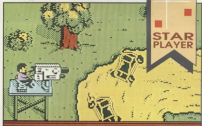
Four teams can take the challenge but one is always the computer which acts as a pacer. The waterborne race is a Top Gun-style overhead view which looks deceptively easy, but the vehicle characteristics are tricky, collisions with other vehicles or land leads to spins, and explosions can throw you off course. In the track racing the tick-tack action is more three-dimensional. A useful map helps anticipate hazards and traps, but again, explosions prove to be a hazard. Probably the most graphically attractive section, this is also the most fun to play.

Toughest is the hill. Back to the overhead smooth-scrolling for muddy pits, slippery logs over water, nets and water can-

not trying to knock you over.

The variety of events, and the assault course in particular, is suggestive of Combat School, but Run the Gauntlet is better presented graphically.

Track racing section—the well animated graphics neatly avoid colour clash as the buggies battle round the tortuous course



OTHER FORMATS

Commodore and CPC versions for Easter (£9.99 each, £14.99 disk) and 87 versions available in April (£24.99 and £19.99 respectively)

"One of the best multi-event games for a long while"

Special 88%

£9.99 each
£14.99 disk

Detailed vehicles and track grounds with colour borders makes for a lively looking game and its technical excellence combined with the wide range of playable sections makes this one of the best multi-event games for a long while.

VERSION UPDATE

RAMPAGE

Sega/Rally Midway • Sega: cartridge £24.95

Choose your monster weapon (shred, bludge, the Age, Lasso the Lizard or Smash the Wall). Press in, start and demolish countless city skyscrapers, pull helicopters from the sky, eat

people live and generally make a nuisance of yourself in Sega's own version of their coin-up hit Rampage.

Rampage is played either by a single player, controlling one



boss, or two simultaneous players. Danger comes from tanks, cops, dynamite bombs, energy-draining pools of water and assaults from fellow giant monsters. Energy is regained by grabbing people from skyscraper windows or from the street and gobbling them.

Similar to previous home-computer conversions, the Sega version lacks variety. From scene to scene and city to city, the buildings are in the same style with only a few minor changes in shape and

size. And there are no new features introduced as you progress through the city levels.

The humorous cartoon-like characters of George, Lizard and Smash are undoubtedly the best element in Rampage, but they can't make up for the lack of variety in the rest of the graphics. It is too high a price to pay for a game with such limited interest, even with the amusement of two-players.

SEGA: OVERALL, 58%



Is the Asteroids idea just too old?

BLASTEROIDS

Imageworks



Artist have been looking to their past successes for new coin-ops, and *Blasteroids* continues the pattern. As in *Galaga* '88 the gameplay might be quaint but you can't beat a bit of nostalgia.

Blasteroids has as mundane a plot as *Asteroids*. The green multi-sectored alien *Mukor* won't come out to play until you've cleared each sector in a galaxy full of asteroids. Yes, this is where the *Asteroids* gameplay comes in as one or two spaceships take part in the mass slaughter of innocent hordes of rock, but these are no ordinary spaceships, they can transform at any time into any of these types of asteroid-killing ship each with its own strengths and weaknesses.

No revamp of a good old fashioned shoot-'em-up would be worth its salt without those obligatory title extras. *Blasteroids* is no different as certain asteroids reveal ship equipment, weapons and energy crystals when blown to kingdom come. The equipment is built onto your ship including speed boosts, extra firepower, a larger fuel capacity and the *Flitzer*, a gem of a weapon causing your ship to spin wildly launching bullets all over the map.

For two players willing to co-operate, the two ships can be combined with one player steering the combination unit, the other unleashing the death and destruction.

On the enemy front it's not just dumb spinning asteroids.

There are five classes of rock spinning through space including burning rocks, rocks with wings, energy-draining space leeches inside and patrolling spaceships.

Evade all space junk from a sector and it's off to the next screen to wrap in the next. Once defeated *Mukor* retreats but soon reappears in the next of the several galaxies per level.

Good as this conversion might be it is still based on a

AWARD
71%

£24.99

Digitised pictures are always attractive but even with backdrops faithful to the arcade machine *Blasteroids* is not a game to push forward the boundaries of software. With a slight loss of high definition comes lack of ship detail although the overall effect is of a very slick game. The music and effects are generally below average — satisfactory yes, but also annoyingly repetitive.

SPECTRUM
61%

GAME: £9.99
DISK: £14.99

Emulating digitised graphics can be a problem in the Spectrum and *Blasteroids* tries bravely, succeeding in part with the asteroids themselves but failing with the confused and overly dull backdrops. The professional presentation is dogged slightly by absolute clunk but in play there's little to distinguish between Spectrum and 16-bit versions.

AWARD
70%

£19.99

The limitation of 16 colours on screen lead to some odd looking backdrops but the asteroids, spaceships and celestial items are done to the arcade. Other than this and the weak sound effects *Blasteroids* on the ST takes the line in being a direct clone of the Amiga version.

very dull original idea. The gameplay is all there (if a little easier than the first time round) and the two player option is great fun to use. Together with four skill levels to provide constant variation and over-busy motifs to master it isn't *Asteroids* but (and it's a big but) it's an unapologetic and ultimately limited game.

OTHER FORMATS

Amstrad and MSX versions are expected in the near future (both £9.99 as cassette and £14.99 diskette) along with a Commodore 64/128 version (cassette £9.99 and £12.99 diskette).

It's not just dumb asteroids — there are five classes of space rock to blast to smithereens



"Good as this conversion might be it is still based on a very dull original idea"

Remember...

STAR WARS



STAR WARS RETURN OF THE JEDI

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*Tengen is a subsidiary of Atari Games Corporation.

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Tanks, better known
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For one or two gamers.



TENGEN

The New Name in Coin-Op Conversions.

INDICATORS

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Indicators provides incredible action and graphics. It challenges you to negotiate each station's heavily guarded corridors, and locate and destroy its control room.

Besides avoiding and destroying enemy tanks and bunkers, you must constantly replenish your tank's fuel supply with fuel canisters. Throughout the many levels of each station, Special features enable your tank to gain enhanced speed, shot range, shot power, force field or even "Smart shots"

After all the enemy stations have been destroyed, you must still face the evil Emperor of the alien empire. Win and the world cheers with you. Lose and Ikon it goodbye.



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Programmed by Konami Computer Systems

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On the high seas of space

COSMIC PIRATE

Outlaw

Programmed by former console specialists Zippo Games, *Cosmic Pirate* opens with a colourful and lively introductory sequence, featuring a Jolly Roger flag ascending spaceward while a sea shanty turns high-tech. Logos swirl by, and then the well-experimented selection system gets you into training simulators or the challenging blasting missions of the future's space raiders who prey on planet-hopping lorry drivers in the fast-moving shoot-'em-up on Palace's Outlaw label.

As a cosmic pirate, you perform daring and dangerous raids for modest rewards, a man who created the death sentence to roam the galaxy and find his fortune.

Missions are selected using codes, with letters indicating their difficulty (from A (easiest) to Z (hardest)). Once a mission has been selected and a deposit automatically deducted from your account by The Council — an illegal organisation that gives prized lightgun data of vulnerable spacecraft for a hefty fee — you are free to launch.

Hyperspaceing to the approximate location of the target spacecraft, you use beacons to hop between galaxy subsectors.

But finding a beacon is less than half the problem, as a toll

must be paid before the hyperspace jump can be made. Credits to pay the toll are earned by destroying hostile craft, detected with a small radar scanner at the top of the screen. Coloured pods are often released from the explosions and when collected have various effects (see box).

When you reach a sector, an icon guides you to the target, which is deactivated by repeated hits. Your ship then links up in the trunk to fire a back through hyperspace, shooting small craft on the way to earn extra credits.

On completing a sector a map of the galaxy area is displayed so you can choose your next hyperspace destination. A mission ends when the ship's damage meter reaches maximum.

Cosmic Pirate is tricky. Even



Turbid flames in space are no substitute for a bunker without a weapon.

some of the frequently-encountered enemies require several hits to eliminate while they barge you and fire some difficult-to-avoid missiles. Things get frantic when you've got a badly-damaged ship and yet you STILL need another 500 credits before the jump into hyperspace can be made... but it's all part of the fun.

Tactics are necessary to plot long paths across the galaxy map, and these — plus the ability to upgrade your ship's capabilities — turn *Cosmic Pirate* into more than just an exciting space shoot-'em-up.

OTHER FORMATS

Available soon, ST version is £19.95. C64, Spectrum and CPC in the summer.

82%

£19.95

Never miss the sound (with die-of-the-road effects) — feel the graphics! The realistic representation of a computer's function keys on the option screens is just one indication of the programme's attention to detail. Excitement would have been added by speeding up the sedately travelling stars, too — but as there's plenty going on, it's no great loss in this fine shoot-'em-up.

"More than just an exciting shoot-'em-up"

Space pirates are traditionally desirable — they're the opponents of law-abiding space busters.

THE PODS

YELLOW 50 extra points
WHITE Smart bomb
GREEN Increases shield level
RED Destroys all enemies and pods within scan-range

BLUE Decreases ship's damage level
BLACK Creates other pods of various colours

PIRATE PRACTICE MAKES PERFECT

Before starting a *Cosmic Pirate* mission, you can hone those space skills on seven different simulations — at a price. Combat One, Two and Three are all shoot-to-kill while Space Sim is a closer reproduction of a real mission. Speedwork Sim costs 1,000 credits, and simulates the capture of one of the huge carriers, while Planet Sim (1,000 credits) does the same for the occasional space wreck you might be given. And for a hefty 5,000, you can indulge in a game of Disasters, a recreation of an old coin-op which may be familiar to teenagers.

Pipes of pieces

PIPELINE

Entertainment International/Titan

The games industry is a strangely fickle beast. The latest mega horizontally-scrolling shoot-'em-up with 24 types of add-on weapons or hideously complex 1000 location arcade adventure may be what the gaming public look to buy, but today's blockbuster soon becomes a dust-gathering has-been. Although quite rare, puzzle games are often the sort to keep you coming back to time and time again. Take Pipeline, for example.

The objective, as in all the best games, is very simple: construct a pipeline, of a minimum number of sections, within a time limit.

The pieces of pipeline are laid on a 16x7 grid of square tiles connected from a set starting position with the use of a cursor or joystick. Two columns (blue and red) lie on either side of the grid, each containing vertical, horizontal, cross-shaped and right-angled pipe segments. With the cursor on the desired tile and the fire button held down, pushing left drops the top piece from the blue column onto the grid; pushing right selects the bottom piece from the red column.

If neither column has a connectable piece directly available, one of a limited number of passes used, holding the fire button while pushing the joystick up erases the current pipe segment from the blue column, giving access to the next one in the line, and pushing down

A puzzle game of great ingenuity and subtlety, Pipeline is simple at concept, frustratingly challenging in play, and addictive to boot.

STAR OF
83%

£15.99

For this type of game visual clarity is more important than fancy graphics and Pipeline on the ST fulfils this criteria with clearly defined pipe segments and tiles. The sound effects are functional and a pleasant jingle rounds the game off nicely.

does the same for the red column. If a piece of pipeline is incorrectly positioned, a limited number of bombs are available to destroy it, leaving the tile free for a better choice of pipe.

The minimum number of pieces needed to make up the pipeline varies with the level, and difficulty is also increased with the inclusion of extra features. Squares, occupied by a camera — have to be avoided or bombed; some pipe pieces only operate in one direction (indicated by an arrow), and a destination square has to be reached.

As recompense, some bonus pieces are already positioned, giving an extra 500 points if used as part of a pipeline.

In comparison to many games, Pipeline's control method is a little complex and awkward to get used to, but once got to terms with presents no real problems. While the gameplay itself is remarkably simple, it is also frustratingly addictive.

Even after practice the first level — where you have the

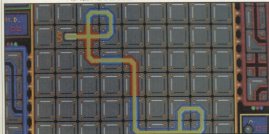
OTHER FORMATS

The Amiga version (£15.99) will be available shortly, while C64, Amstrad CPC (both £9.99 cassette), £14.99 disk), and Spectrum (£9.99) are in the pipeline (green) for release early summer.

freedom of the entire grid and only have to lay a minimum of 17 pipe pieces — can prove tricky so the later levels are a huge challenge. Passes can be used for direct access to these levels, but you'll need many hours of play before you feel brave enough to tackle them!



"The objective, as in all the best games, is very simple"





Through persistence to the stars

FEDERATION OF FREE TRADERS

Greenin Graphics

Potentially Greenin's biggest title for years, *Federation Of Free Traders* (FOFT) has been in development for nearly two years. Drawing creative sustenance from *Elite*, the science fiction RPG *Traveller* and a host of other sources, 3D-Galaxy programmer **Paul Dwyer's** confection finally leaves its dry dock. The question is — can it float? *Elite*?

When the colonization of the universe game crime, pirate ships started to appear and attacked colony ships. Earth responded with a space police force, but maintaining this and supporting the colonies proved too much of a financial burden.

Eventually Earth severed all links and the universe became lawless. With the colonies on the verge of chaos, a group of pilots formed the Federation of Free Traders (FOFT). Owing allegiance to no-one, the federation set out to protect colony ships from pirates and perform other tasks around the galaxy — at a price.

Now the federation is spread throughout the galaxy and the threat of piracy is diminishing. Indeed, the time is ripe for you, a fresh-faced, budding star pilot to join FOFT and make a living in the universe.

Gainetspeak

Starting in the relatively safe haven of the first system space station, you have no more than a basic Hanley Mark I fighter and 150 credits to your name. All space stations have a computer network available to star pilots — known as Gainet, which is used for trading, information access and general communication.

One of FOFT's much-touted features is the "computer language" within Gainet. A cross-fertilized mixture of BASIC and Assembly Language, using SIMPLE it allows you to write away hours writing programs or downloading from fellow pilots a selection of games to play. Playing to real gain is the game, the purpose of its inclusion is highly questionable.

Trading follows a similar pattern to *Elite*, with a wide variety of agricultural, industrial and miscellaneous goods on the open market. Prices change constantly but real profits lie in black market goods which can only be obtained by going out into space.

If you find a less-than-virtuous trader you can strike up a conversation. All communica-

tion is based around AI-style keyword recognition. An original touch but it does tend to get repetitive due to limited vocabulary.

With the profits made from sales, extra equipment can be bought. Improved starfighters, lasers, missiles, shields, extra ammunition and other offense/defense systems are on offer and the scope for upgrading your ship is tremendous — the sheer number of items easily beating those of *Elite*.

The real way to get rich quick is to go on an orgy of 18 missions given by FOFT HQ, increasing in difficulty as you progress through the eight levels. FOFT requires you to search and destroy, investigate pirate activities, res-



Stunning graphics, great ideas, but really flawed

our people from wrecked ships, deliver messages, and so on.

FOFT has a lifeless, run-of-the-mill planetary sequence where you briefly or land on cold 3-D planets avoiding hostile laser fire.

Except for certain missions this slow but impressive effect is unnecessary to the gameplay and remains a much under-used feature.

Pirates too many

Space flight and combat follows these steps, with galactic and solar system hyperspaces, local jumps, docking with space sta-

tions, and launch/missile control all available. A unique touch is the 3-D galactic map for navigation, truly to use with its extra dimension but impressive nonetheless.

What lets the game down in a major way is that local jumps are stopped if pirates are near. A similar idea to Elite, this would be fine if there weren't so many of the pirates to begin with. At each jump you're expected to wade through herds of them, which quickly becomes very tiresome. In fact, this isn't merely a let down, for FOFT, it's a catastrophe.

It completely spoils what could have been the best game ever and makes FOFT a sub-optimal purchase. Even with its welcome features, the £30 price tag can't be justified at all.

STOP PRESS!

In late February, Gamelit withdrew all copies of FOFT for minor changes—but the big problem stayed in.

A few bugs were corrected, according to programmer Paul Byrth, and it's now easier to save to disk. Game-testing on an unprotected version had meant that Gamelit didn't realize their copy-protection system hindered game saving.

What added, says Gamelit boss Ian Stewart, is a Gamelit Guide-Start Guide to get you straight into the first mission.



Value of
44%

£29.99

FOFT is certainly a glossy game with a great attract mode, fast moving solid 3-D graphics of spacecraft and a music disk with 18 classical tunes on it. The planet fall sequence is a little slow but considering the scope of the game this isn't surprising. The bad news is that the manual is atrocious, saying little about the intricacies of the game and being altogether too vague. At 26 pages long it's woefully inadequate.

OTHER FORMATS

An Amiga version is planned for the end of March priced at £29.99 with a PC version under consideration.

"Even with its welcome features the £30 price tag can't be justified at all"

Getting rid of pirate ships is at the heart of FOFT's problems — there are too many of them

THE ONE BIG PROBLEM WITH FOFT

On paper, FOFT looks like the best space game ever — an immense improvement on Elite in realism, depth, scope and sheer size. Just look at the huge number of ships to meet and destroy to run.

But in practice, things are nowhere near so rosy — and inevitably it's all the fault of excessive realism. For the sheer number of ships going about their own business in the FOFT universe slows the game down to its virtually unplayable.

Once you're hyperspaced into a system, it should be a simple matter of performing local jumps toward the space station/planet/targets. But, as in Elite, local jumps (called Timejumps) are halted if a ship is in the vicinity. Only by destroying the intruder or letting it get out of range, can you continue.

This feature works fine in Elite, where ships are few and far between, but in FOFT it all goes awry, and you're only been in a system for a few seconds when the first of many ships

appears. Unsurprisingly, the accompanying title sequence states that in a climactic battle FOFT pilots killed most of the pirates — yet FOFT space is literally jam-packed with ships!

From here on, it's a very long haul as endless spaceships come past, and sometimes attack — a green-gilded Comet wouldn't be in a good situation with one laser and two missiles

in board.

And unless you fancy taking on several ships per jump, the only sensible option is to wait for the enemies to leave the area.

This is where the problems really rears its ugly head. The waiting time varies, but after many plays we reckon it's an average of ten seconds for each line to become safe, multi-

plied by about 50 (the average number of jumps needed to reach a destination) — which adds up to more than eight minutes!

Multiply this again by the number of planets and galaxies in FOFT, and you could be talking **HOURS** of wasted time, holding down the fire/stop key with one hand and twiddling the other thumb. In fact, visiting all 11 million planets — not that you'd want to — would take approximately 127 years!

What if it all comes down to is that the number of ships has been wrongly set.

FOFT programmer Paul Byrth argues that it's a random-number determination—but perhaps it's random in the wrong range.

Defending himself, Byrth said the game is hard, yes, but that's life. It's not meant to be easy... our game-testers got used to it and were soon getting places. It seems Gamelit's game-testers have the patience of the immortal, and that's a very rare quality.



Planes and jeeps and bombs

SILKWORM

The Sales Curve (publisher to be announced)

Team's *Silkworm* coin-op wasn't exactly the biggest licence deal going, but it had in it enough destruction and mayhem to provide someone with an exciting computer diversion and The Sales Curve have taken the plunge in commendable style. Detonators are running round your homeland with their entire air force and arms. Just as things look impossibly bleak, two warriors in a helicopter and a jeep enter the fray in an attempt to penetrate the enemy defences and destroy the reactor at the heart of their fortress.

Like most shoot-'em-ups the plot is always of minor importance — and *Silkworm* is the same. After all when do horizontally scrolling 11-levelled shoot-'em-ups ever need a plot? The actions seem to be rather partial towards helicopters as the vast bulk of their force seems to be made up of homing choppers of all shapes and sizes. Helicopters aren't the only aerial threat, however. Jet fighters, rockets and both nuclear and SAM missiles fly around posing severe problems. The enemy ground forces are just as bad with robots, tanks and anti-aircraft missile sites spawning forth

bullets and while not death at every opportunity.

The action continues through to the section and where end-of-level opponents alternate between a major helicopter and a missile-firing tank. Both are pretty awesome opponents, but with a few well-aimed shots they can easily be reduced to so much scrap metal. Double cannon, speed-ups, shields and smart bombs are on hand to help out when the going gets tough.

Harmonious play

Rather than have two similar vehicles blasting their way through each level, *Silkworm* adopts a Last Dual style of gameplay with both players controlling markedly different weapons of destruction. One takes to the skies in an attack helicopter, the other drives a jeep, which has a neat line in leaping over obstacles, across the land. The jeep may be restricted to only momentary leaps off the ground, but it also has a cannon for firing in multiple directions including backwards.

In *Silkworm* only harmonious teamwork can save the players through each level of sheer mayhem. That and a considerable amount of courage, nerves

Last Dual style two-player action uses one player in charge of a jeep and the other thing a helicopter. *Jeeps* have ground-based SAMs (shoot), *planes* you can't tell — just blast the enemy choppers and get the last out





The helicopter fights off a vicious tank attack as enemies strike by the dozen

SCORE
86%

Overall use of greens and greys gives *Barbarian* an authentic military atmosphere, which is reinforced by the non-stop destruction. Graphically the sprites may be small but the game has a wealth of variety and the attention to detail is first class. Sound effects add to the atmosphere.

and continues plays as well.

In fact teamwork is more than an advantage, it's a necessity — the onslaught of enemy troops, tanks and missiles is constant and at times the screen is literally jam-packed with enemy firepower. The action starts off chaotic and doesn't get any easier.

Luckily both vehicles are fast moving although the helicopter has a better time of it in being able to fly around most of the screen. The game's restricted mobility puts you at quite a disadvantage on later levels but through harmonious teamwork it's possible to succeed.

Teamwork games always work well and *Barbarian* works a lot better than most with two different craft requiring separate game tactics in order to succeed, and even in one-player

mode. *Barbarian* plays extremely well. The vast number of enemy opponents quickly get the adrenaline pumping, the addictiveness and playability levels are high and the action never stops.

Barbarian may not be the biggest of barons but this shouldn't stop it from becoming a much deserved success.

OTHER FORMATS

Spectrum, Amstrad and Commodore 64/128 versions are planned for April.

HANGING FIRE

At the time of writing *The Sales Curve* had yet to finalise negotiations as to who will be publishing *Barbarian*. Prices of all versions are also unconfirmed but expect normal pricing when the game is released.

"The vast number of enemy opponents quickly get the adrenalin pumping"



VERSION UPDATE

BARBARIAN II

Palace ST: £19.99

FROM the very beginning, impressive sampled sound bites set for the first class conversion.

Play either bulky Marston (rescued from Conan's clutches in the original *Barbarian*) or the husky conspicuous hero armed accordingly with sword or axe and adventure through four maze-like levels of some 70-plus screens of baron onslaught.

The most remarkable feature of the ST version is its crystal-clear sampled effects, but the graphics are good too. The ST's resolution has been used to give a clearer, more precise edge to the C&M's original sprites and animation is excellent.

OVERALL 82%

On 128, 150000 bytes

16-BIT NEWS FLASH!

Amiga *Barbarian II* has been designed at April/May — because programmer Richard Lemelmer was tagged down working on the Amiga Shoot-'Em-Up Construction Kit (on Palace's *Duke* label).

But a new programmer has been found for the Amiga version, which will have a few more colours, slightly more definition and a few more sampled sounds, according to Palace Press Press.

PC users can get *Barbarian II* in April too. And back with the 8-bit, C&M release is expected for late March.

A cleaner, more spritely version of the Atari ST — better fit of most interesting scenes



Horizontal scrolling is a shade rougher and the sound predictably weak in comparison. While graphically not quite as sharply defined as on the Amiga and losing out in the number of colours available, *Barbarian* is a great ST find and even better in two player mode.

Dull driving from Imagine

WEC LE MANS

Imagine Software

Despite wider hydraulics than Sega's *Cool Run* and being a technically and graphically better game, Konami's 1988 arcade release *WEC Le Mans* topped in the credits. Purists wanted to race *Cool Run*'s very Testarossas, not mess about with turn-of-moment Persenches. Sticking off with 8-bit versions, Imagine now try and release the balance in the home.

The French race upon which this game is based is an all-day-all-night affair, but on the computer you're only expected to compete with other drivers against an allotted time limit around four laps with three checkpoints per lap.

Running into the other, other

devices, drivers can see your car spinning off the track or flipping and over end, and it's in the extravagance of the graphics that a coin-op can often disguise shallow gameplay.

Needless to say, the 8-bit conversions suffer in comparison to the original, and *WEC Le Mans* fails, inevitably, through remaining too faithful to the coin-op.

Save
14%

case £9.95
disk £14.95

Unlike the Spectrum version, the Commodore game is awful. The car spins is nicely detailed, but you can forget everything else. The striped track often staggers backwards, road-side graphics are minimal and the sound effects inconsistent. Avoid it.



Amazing! WEC Le Mans out-sets Sega, but it's not so fast at home

Section
61%

case £9.95
disk £14.95

Excellent presentation and superbly detailed graphics fail to disguise the lack of visual variation as you progress. Sad, because it kills long-term playability.

OTHER FORMATS

Also available for the Amstrad (£9.95 case, £14.95 disk), ST and Amiga versions will be out for Easter at £19.95 and £24.95 respectively

"WEC Le Mans fails, ironically, through remaining too faithful to the coin-op"

Two heads are better than one

CAPTAIN FIZZ MEETS THE BLASTER-TRONS

Psycholapse

Addictive, fiendish and relentless action are words used to describe this game by its producers. But we wonder whether the authors of *Menace* (TGM010) and the brilliant *Raid* (TGM015) have been playing the same game they sent us to review.

Captain Fizz has been donned even a new identity — that of intergalactic stormtrooper — and a Headache in the Blaster-Trons have raised space ration scarce and sent it plunging into

the sun. To avert catastrophe, Fizz and Fizz must alter the flightpath held in the station's master computer. The trick is to get all the way there from a dis-

tant orange key despite projectile interference from gun-toting Blaster-Trons.

Working best with two players, the screen is split horizontally in half for each character. Gameplay is unshapely stan-

dard. Tick-screen corridors, locked doors, energy barriers, colour-coded key cards, collectable armour, failing health points, enemy monsters and so on. A split-screen *Countdown* with a few game-reducing enemies and some puzzles is not what today's gamers want. This is quite a surprise from Psycholapse.

Save
38%

£14.95

Disappointingly small, plain sprites feature in simple background images where tick-screen fails because of the reduced area. And sprites, flicker badly where several are present. Why the sound effects aren't emulated is another mystery of this Psycholapse collapse.

OTHER FORMATS

Work on PC and C64 games and — oddly for Psycholapse — a Spectrum version is under way.

Split-screen action isn't new, but the level of silliness is

"A split-screen *Countdown* with a few yawn-inspiring enemies"

Save
39%

£14.95

The Amiga graphics are identical to the ST's — even down to the split-screen flicker — but at least a few sampled sounds have been put in and the house-style title music is interesting. The relatively low price tag is some compensation for unambitious programming, too.



Paradise lost, vengeance found

DENARIS

GB Gold

Far off in the depths of space lies the once-beautiful world of Denaris. Now ruled by alien invaders, Denaris is dying under the weight of war machines churning up the ground and polluting its atmosphere and despoiling its people.

Far off in the outer rim of the galaxy, a solitary star fighter picks up a distress call from the planet and, setting its engines to light speed, races to the rescue. The alien scour will pay for what they've done to Denaris with their miserable lives! Let's go kick some alien ass!

Down through the asteroids goes the intergalactic savour. Waves of alien fighter planes zoom up to intercept him but they're no match for our hero even though he's only got a puny laser gun to start with. As he rips a swathe through the alien formations, extra weapons come floating from the wreckage — no point not leaving 'em for the enemy.

Over Denaris things get trickier: the automatic defenses are in town with laser barriers, guns, walkers and robot tanks trying to get rid of the unrepentant pirate.

Laser breath

But the persevering warrior progresses through the alien waves. The damage increases to a crescendo, related by the arrival of the first of the Planet Guardians.

Several well-placed laser bolts later the next of Denaris's big guardians loom into view and the genocide continues. As he jumps a laser bolt into a multi-

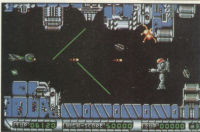
textured, extra-terrestrial and watches it explode on the sun face below, the warrior smiles.

"Even if I do save the people from the aliens," he muses, "it there be anything left of Denaris afterwards?" Who cares! Let

these alien mothers eat white-hot laser death!

But enough of the revenge-inspiring plot. Back in "real-world" intergalactic shooting shoot-'em-up territory it has to be said that Denaris cannot pretend originality. However, although it may draw on ideas from many other games (among them R-Type and Nemesis), this doesn't detract from the quality of its implementation.

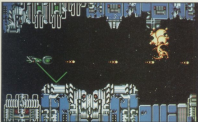
Denaris isn't for the faint of heart. Heavy reliance on the fire button isn't going to get you very far, and it is Annalyte's gold medal of joystick dexterity is of equally importance and just trading experience is essential.



They said Denaris was beautiful, but it turned out to be just painted with burnt aliens looking for a spot of Saturday night casual can rage.

OTHER FORMATS

No other versions are currently planned.



83%

£19.99

While not quite as technically impressive as on the 64, Denaris still manages to be a superb shoot-'em-up with all the trimmings.

With the Amiga's potential, Hammer Arts have created some wonderfully detailed regions to fly through, with varied and often highly original Guardians. The great gameplay leaves the others standing.

87%

case £9.99
disk £14.99

A superb shoot-'em-up, Denaris may not beat Annalyte for polish and presentation but it's certainly up there in the higher echelons in terms of gameplay and addictiveness. Each level is sufficiently varied in style, tactics and graphics to hold your interest and, like a good book you'll want to return again and again.

"Heavy reliance on the fire button isn't going to get you very far"



VERSION UPDATE

ROBOCOP

Ocean • Amstrad disc £9.95, disk £14.95

OCEAN were unfortunate in releasing a bug-infested game before Christmas, but the matter has been put right.

Essentially a boosted Spectrum version, it has the same incredibly infectious gameplay but with markedly better colouring and presenta-

tion. Lush, late spot effects let down the atmospheric music, but because of the no-nonsense, all-outlet blasting, RoboCop delivers the goods in fine style.

OVERALL 78%

SPECTRUM: 70% (4.8%)
C64: 78% (5.7%)

VERSION UPDATE

RASTAN

Sega/Taito
Sega: cartridge £24.95

RASTAN's out to rescue the king's daughter. Wielding a sword, he runs and jumps along a horizontally scrolling wilderness, before descending into caves or swinging over lava with the aid of handily positioned vines, slaying monsters, ghostly objects are sometimes left in dead monsters' wakes. Axes, axes, fire sword, energy-replenishing potions and protective shields.

A disappointment from the outset, the scenery's composed of frequently repeated cells. Rastan's a dwarf and most sprites are blocky with minimal animation and garish colours.

Some gloriously speedy music, amusingly silly simple design and issues, but with only very attack moves and fiddly controls, it's unlikely you'll want to come back to play this all that often.

SEGA: OVERALL 42%



VERSION UPDATE

LIVE AND LET DIE

Bomark • Amiga: £19.95

THE AMIGA version — surprise, surprise — looks just like the ST game, with no attempt made to improve the ported across ST graphics. You do get a funnier look of the James Bond theme, however. Like all other versions, fast-moving playable action is marred by a

lack of depth. Although the remains one of the better Bond tie-ins, it's overpriced for what it offers.

AMIGA: OVERALL 61%

AMSTRAD: 70% (4.8%)
ATARI ST: 70% (4.7%)
C64: 78% (5.7%)

VERSION UPDATE

HOSTAGES

Infogrames • Amiga: £24.95, PC: £24.95

THE AMIGA version is made immediately more difficult than the ST game because your men are killed after only a couple of shots. The Amiga improves on the ST's grainy graphics, adding clarity rather than detail but still having some unattractive ripple shading. Cleaner samples and a tense tune help generate atmosphere, nicely complementing this varied and amusing SAS

simulation.

Worse use has been made of the PC, with only CGA and monochrome supported, so that the dark, moody scenes of the other 16-bits have been replaced by an inappropriate gaudiness.

AMIGA: OVERALL 78%

PC: OVERALL 71%

ATARI ST: 70% (4.7%)



A trip down memory lane for arcadesters

GRADIUS

Konami

Gradius is probably better known by its coin-op name of *Nemesis*, a classic arcade game which pioneered the progressive weaponry system and proved to be the inspiration for almost every shoot-'em-up since.

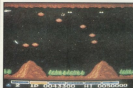
Gradius follows the *Nemesis* coin-op to the letter, which is another way of saying that the scenario is dead irrelevant. The attack patterns, stage layouts and presentation mirror the arcade machine exactly and coin-pumping veterans should find most of their tactics can be used — what a comfort.

Surprisingly *Gradius* is the first horizontally scrolling shoot-'em-up to appear on the Nintendo and as a result it will take some beating.

Nintendo gamers have had to wait a long time for this conversion and Konami haven't disappointed them. Watch out for even better things in the *Nemesis* series when *Jaxxmaster* is released in late '88 under the name of *LifeForce*.

Games with repeatable action-packed scenarios are usually shoot-'em-ups — *Gradius* is one such.

"In the transition to console *Gradius* has lost little of its former glory"



The first horizontally scrolling shoot-'em-up for the Nintendo won't disappoint players

VERTICAL
76%

cartridge: £24.95

Waves of nostalgia will bring a tear to many an arcade veteran's eyes. In the arcades *Nemesis* was THE classic arcade shoot-'em-up and the Nintendo conversion is little different in terms of gameplay. Underrated slightly by less than perfect graphics, a few soundtrack and a strange loss of speed on level five this is still a good shoot. In the transition to console *Gradius* has lost little of its former glory.

VERSION UPDATE

GRAND PRIX CIRCUIT

Accolade/Electronic Arts

Commodore 64/128: case £9.95, disk £14.95

SUMMARY Formula One racing is what it's all about, differing only slightly from the PC version, *Grand Prix Circuit* has you racing round eight international tracks against nine other equally determined Formula One competitors.

Single track races and a Championship Circuit are an offer for budding Nigel Mansell with any of three types of car and five skill levels to provide a progressive challenge.

For all its smart presentation, effective illusion of movement and satisfyingly simple gameplay *Grand Prix Circuit* is let down by an acute lack of depth. The game attempts to bring together the complexity of F1 while trying to maintain the pace of an arcade racing game — a combination

bravely albeit back on track, however, this still provides a competitive racing update.



which fairly works at the best of times. The result is that Accolade have provided little that's not been seen before by racing game enthusiasts.

OVERALL 47%
BM PC: TQM'S 64%

Nazis on The Moon

ROCKET RANGER

Cinemaware/Mirrorsoft

The story so far: Europe is overrun by hordes of goose-stepping Nazis, while back in Berlin The Fuhrer is plotting to take over the whole world by devious means. The evil madman's key is the mineral lunarium, which only exists on the moon and is mined by a chain gang of women because of its effects on men. The Nazi leader intends transporting the over-some element (on rockets to Earth) to make loads of lunarium bombs which will reduce the IQ of males everywhere by 30%.

But trouble not — Rocket Ranger, a beefy bloke with a lunarium-driven power pack strapped to his back, can save the world. All he has to do is infiltrate the Nazi rocket factories, find enough bits to build a rocket, rig off to the moon and destroy the lunarium base. (Are you who you know how.)

But the man's busy before getting anywhere near the moon there's a kidnapped scientist and his daughter to rescue, a highly explosive Zeppelin to be disabled without blowing it up, five secret agents to contact and their findings to be acted

Everything to make a Rocket Ranger appears as if it may on the increasingly level of the disk — ready for launch to the moon

upon, from the South America. Luftwaffe fighters to put down and all those little rocket bits to be picked on the way.

Unlike some of Cinemaware's other titles, Rocket Ranger's graphics and gameplay complement each other perfectly. There is a staggering amount of things to do, and the game's humour soon proves witty

infectious. After a while you really do get the sensation that you're taking part in a Flash Gordon movie — and that's a lot of fun. Not as cheap as it is a visit to the cinema, but then you'll be enjoying this for a lot longer!



Faster than the speed of light



All this and Barbarian too

SKRULL

16/32 Edition

Psygnosis's Barbarian (up to 87% in TGM002) has spawned surprisingly few imitators, but Skruul — from an obscure French software house — is a fine example, with even greater depth than the original. And though this is not an official licence, Skruul is the namesake of a sword/magic movie and a series of comicfantasy books — which all adds to the hunky hacker mystique!

This barbarian does have other unusual features — it's not every day that the most powerful magical forces of the world get together to produce a child. And the parents of Skruul are the amazingly beautiful Dan Vorian (no page 3 jokes, please), the symbol of all that's good and pure, and the Shadow Man (no Hank Marvin jokes, please) — a rugged but cold, evil sorcerer.

Blago must run in the family, because it's only Skruul who

can save the world when it begins to collapse in on itself, its life and light dying, fading. And the key to the world's salvation lies somewhere in a maze of dark caves, full of savage, energy-draining creatures and traps which Skruul must slaughter and avoid — or die a bloody death himself.

You guide this hero through the tip-screen play area using mouse-controlled icons. Most action icons represent two com-



The key to the world's salvation lies deep in a maze of caves, and only Skruul can fight his way out of the forces of evil

monsters, for the left and right mouse buttons; for instance, walk and run are available in left or right directions, sword thrust can be at either of two heights, and so on.

Objects can be used to activate portals and activate traps, though often well-timed leaps are equally useful for avoiding hazards.

The dual-action icon system is a blessing, giving great flexibility without the need for an

"Deeper and more compelling than Barbarian"

Yawn-along-a-Tolkien

WAR IN MIDDLE EARTH

Melbourne House

Melbourne House have been associated with Tolkien since their adaptation of *The Hobbit*. *Lord of the Rings* and *Shadows of Mordor* were received well. *War in Middle Earth* is a something of a departure in the series in that, unlike its predecessors it is essentially a wargame.

Most Sauron's ring of power, having come into Bilbo Baggins's hands (*The Hobbit*) has now been passed on to his heir Frodo. You control all the characters and armies allied to the fellowship of the ring — dwarves, hobbits, elves and men.

The game is controlled from three screens using a command cursor to select desired options. A map displays Middle Earth, its terrain types and positions of any allied units.

Lord of the Rings fans will notice errors in the accompanying booklet — not only are some of the names spelt incorrectly but the story's wrong in places as well and there turns out to be very little for you to actually do.

The battles soon become tedious as it's too easy to win even when faced with ostensibly unavourable odds.

— *War in Middle Earth* is very

Middle Earth as seen from TGM's space satellite in the *Amiga*!



OVERALL 65%

case: £9.99 disk: £14.99

The battle screen features a few bugs — sometimes several men turn a straight list with each member performing exactly the same movements. Odd.

OVERALL 62%

case: £9.99 disk: £14.99

Occasionally the best version, the characters are more detailed and colour has been used effectively, but battles take an age.

OVERALL 65%

case: £9.99 disk: £14.99

As the fastest of the 8-bit conversions, the battle screens are the least tedious — they tend to be over quickly. The graphics are largely monochromatic with a bit of colour splashed around on the campaign map. A reasonable implementation but lacking

disappointing. Tolkien fans will find the lack of detail frustrating while wargamers will find this too straightforward to offer a lasting challenge.

Other Formats

Seen to be available for the ST, PC, Amiga.

"Too easy to win to offer a lasting challenge"

VERSION UPDATE XENON

Melbourne House
Spectrum: £7.95 case

REMEMBER when Xenon came out on the ST/Amiga a score of 65% was reckoned it was the most challenging shoot-'em-up to date and a near-perfect arcade conversion to 500k. Now the Spectrum version has arrived and let's be well informed as its predecessor, putting the Specto into test-tubes, returns the bonus of 10-bit versions.

The gameplay remains exactly the same as before, with the player controlling a spacecraft which can transform into a hover ship to take out ground-based aliens when required. Over a topologically scrolling, beautifully designed landscape, the objective is to destroy as many of the innumerable Xenon craft and ground installations,

picking up icons left in their wake. There are 10 levels in all to complete, and at the end of each a massive mother-alien needs despatching before progressing to the next level.

This game just comes additively and the combination of blasting and building your ship to near-awesome proportions as in Mamech keeps you going back time and time again. On the minus side — the Spectrum version is if anything, a little too hard. On later levels

proves a real pain.

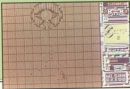
128K versions are in for a musical treat — you'll be hard pushed to tell the difference between 1 and that on the ST. But for everyone else a remarkable conversion. Animation is smooth, the number of aliens awesome, the alien blasting finger-breaking.

OVERALL: 82%

ST: TGM £25.99
Amiga: TGM £25.99



Destroying terrestrial enemies: the concept of 10-bit versions, Xenon takes the Spectrum to new arcade graphics heights



Madbe Madness gets modern

INCREDIBLE SHRINKING SPHERE

Electric Dreams

Madbe Madness proved to be a durable arcade idea which has spawned several clones in its time, and it's a tribute to the original concept that most lookalikes have been inwittingly playable and addictive. The Incredible Shrinking Sphere from Four's Field rings the changes to produce an imaginative ball-on-a-maze game for the Spectrum as you race in your sphere fighter on a training mission called the Sargolmadore Run.

The Run is made up of eight levels, subdivided into four interconnected, horizontal mazes. A good enough sense of direction isn't enough, however, to find exits and life. The sphere is malleable not only because it can shrink, but also because it can expand and change its weight by touching special tiles. Small means you can use narrow passages, light means you don't fall through cracked tiles, but at other times you need to be big

and heavy to push objects around.

In the mazes hostile tiles can trap you, domes send you zooming off at high speed, and walls out for assassin generators — hostile drones which take a life on contact — unless you have a shield gained by touching the relevant tile or shoot them first.

Ammunition is limited, but you can get a refill by bumping into an ammo dump. The Run's toughest problem however, is the slight delay at all the blank tiles. Contact with a decayed tile is deadly, so there's a time limit. But clashing blindly often causes the normally erratic ball to become quite unerritorial.

Incredible Shrinking Sphere is a fairly complex game and one of immense playability. Skill and strategy are needed to get through the levels and this combination gives it great lasting appeal.

ARCAD
80%

£24.99

Four's Field have come up with a fascinatingly addictive variation on the simple maze game. The ball glides smoothly around the playing area although reflexes may find the inertia makes handling tricky. The sampled tune — a little rough — isn't as well suited to the game as it is on the ST.

ARCAD
80%

£24.99

Original, challenging, enjoyable and well worth the ten quid, the only major problem is the fact that after every life the sphere goes back to the top of the first gate. The title tune hardly deserves the name but spot effects are adequate.

It's hard to believe since a devoted Madbe Madness clone (all the events, but Four's Field have gone several steps ahead with this light-to-addictive game — design written in the top, Spectrum on the right



Beauty meets and professional programming unite together on the ST4

ARCAD
80%

£19.99

A disk version with very glossy presentation though some opponents look a little dull on the ST's limited colour screen, and ball movement doesn't quite match the Amiga's quality. It's nice to hear music that's original for once and not just a sample from the Amiga game. Multi-load is swift and doesn't distract from the game.

ARCAD
63%

cass: £9.99, disk: £14.99

Eye-straining background colour schemes aren't helped by monochrome sprites and juddery scrolling. Some graphics are lost in the mazes and the occasional sound effects are harsh, but some playability manages to show through the faults.



ARCAD
84%

cass £9.99
disk £14.99

Anthony Lee's muted interludes, bouncy in-game fit and Four's Field's professional programming touch all come together in what is by far the best 8-bit version, the all-round presentation beats the 16-bit versions hands down too.

"A complex game of immense playability"

Lord love a duck

DYNAMIC DUO

Firebird

Despite Firebird's ambitious title, there's little dynamism about this reworking of the old key-collecting theme — it's the sort of game that gives 8-bits a bad name for indistinct graphics and jarring music. And it's also a disappointment from programmers Probe Software, who did pretty well for the same software house with *Savage* (over 70% in TGM814).

Only the two-player option gives it any kudos, because some people just can't get enough of each other's company. Like the dwarf and the duck, for instance — when this wimpy duo venture into the curiously-named Night House in search of the repeatedly-named Calculators Room, they stick together, with the duck riding on his friend's head. But as the two make their way

which contain key parts, and then bring the dwarf to collect them — he's got to make himself useful somehow.

Assorted flying skulls, eyes, and other scores of provided and make frequent appearances, but as their flight patterns are fairly predictable it's just a matter of shooting from the right position.



around, falling through holes to go down and disappearing through doors to go up (moving as push as levers in this program, grr), the duck can fly off in search for parts of the Calculators Room's key.

Anyhow, the basic idea is to collect all ten parts of the key, using a simple diagrammatic map, piece them together and go for a quick calculation. Over the dwarf's extraordinarily fat-foot pace, the best strategy is to send the duck out looking for chests

Scoring 86.7 on the TGM Index of Perfectionism, *Dynamic Duo* is about as worthwhile as a key to the Calculators Room. There's not much to distinguish the three versions, but read on nonetheless...

arcade
25%

coins: £7.99

Plain, repetitive bank guards and unexciting sprites are nothing to distract you from the gameplay — plain, repetitive and unexciting in fact.

arcade
29%

coins: £9.99

disk: £12.99

The best version (pictured above) does offer a moderately boppy title tune and occasionally stimulating graphics.

OTHER FORMATS

Firebird have no plans for 16-bit versions, hardly surprising. It would be difficult to add depth or additivity to this low-budget gameplay.

arcade
24%

coins: £8.99

disk: £14.99

There's plenty of colour here — pity about the flimsy title screen and extremely irritating in-game music. Also, be warned: the terrifying Grim Reaper is not a stray ghost from Pac-Mania.

New look space-invading Eighties style with

GALAGA 88

Namco

Way back in the mists of time, when coin-ops were in their infancy and crude consoles named the Earth, there lived an intantaneous shoot-'em-up called *Galaxians* — a program second in stature only to the mighty *Space Invaders*. Since 1975 Namco produced four sequels, gradually introducing more features: *Super Galaxians*, *Galaga*, *Galpus* and *Galaga 88*.

Galaga 88 continues in the time-honoured arcade tradition of a lone fighter saving the universe from a horde of unspeakable aliens, only this time the ship isn't highly manoeuvrable.

Instead it's steered left and right at the base of the screen, shooting vertically upwards. It does, however, have the ability to fire to either side, and up to three may be used to create a magnificent super ship.

Aliens of various types sail around screen and, given half a chance, gather into a fleet near the top of the screen from where they start devastating raids.

Some flying insectoid types, including swarming pods, attack formed by two smaller aliens take more than one shot to kill.

Special offers tower

halfway down screen and evil tractor beams — if you allow your ship to be captured the alien takes it to the top of the screen.

When destroyed, it releases the captured tank to link with the ship currently under your control and increase its firepower.

Every few levels a bonus round, the amusing *Galactic Dancing*, features 40 aliens, not for blasting, parading around the screen in line to an entrancing musical score.

The gameplay of *Galaga 88* might be simple and old-fashioned but its incredible addictiveness proves that old stars can sometimes be the best. The visual presentation is excellent and the difficulty level is just right. This is one conversion shoot-'em-up fans would be foolish to miss.

Paris to Dakar on the PC Engine

VICTORY RUN

Hudson Soft

With the Sega Megadrive on the horizon (see TGM Report), the PC Engine may be in for a tough time in the UK as the two consoles jockey for top slot. The Sega has the advantage of being the offspring of the major coin-op producer of the same name. Sega's biggest title is surely *Out Run*, the massive racing game which the Engine can only hope to combat with an equally playable clone. Can *Victory Run* deliver?

The player must take his four-gear truck on a road run, and naturally enough, victory is the aim of the race. Curiously, though, for a game of Japanese origin, the race is a recreation of the Paris-Dakar rally.

Unlike many games of its type, it's not just a case of going as fast as possible while avoiding crashes. Before beginning the race the player had 20 credits to spend on spare parts. These are divided up into five

types: brakes, suspension, gears, engine and tyres.

Each stage of the long and testing route is played against a time limit. Progress is hindered by bakers, sports cars, pick-up trucks and tonnes on the same journey, as well as by the slopes, turns and roadside obstacles. Collision with any of these wastes precious time, and in this strange computer console world this is shown by the rapid onset



PC (DOS)
86%

£29.95

The introductory scene where the fighter leaves a space station, sets the standard for the whole game which is coloured with well-chosen background features, lively sprites, smooth scrolling and high-quality music and effects. Many diverse aliens swarm smoothly and rapidly round the screen and combine brilliantly with the amusing music of Galactic Dancing. *Galaga 88* is always playable, wonderfully challenging and has you frequently coming back for more. It's faithful to the coin-op in every respect and is as good a conversion as *B-Type*. Nuff said.

"The addictiveness proves old ideas can be the best"



at sunset and night.

It is at the end of each stage that progress is marked on a map window and the parts purchased earlier are used to repair worn parts of the vehicle.

Victory Rura, problem is twofold: graphically, the vehicles don't change and the horizon scenery changes are dull, and in playability, the perspective is not effective enough and the

hills and bends not wild enough to generate any tension. The result of this is that the game soon becomes boring and winning the Patsy Dancer rally seems to be an amusing challenge.

PC (DOS)
59%

rem card £24.95

The definition of the various vehicles is, surprisingly, quite sloppy. Your rally track is duly coloured and quite angular whilst amongst others the trees are stupidly large. The track edges are quite blurry but perspective is good and the hills are effective. Sprites of vehicles are blurry and unconvincing is a little blurry and unfortunately is made worse at top speed, when things happen at a ridiculous pace.

"Soon becomes boring and ceases to be an amusing challenge"

Street cleaning action from from

VIGILANTE

from

The tough streets of New York are about to get a lot tougher when *The Vigilante* finds out his girlfriend Madonna has been kidnapped by a gang of skin-heads. This guy's got it in for every member of the gang and even the thought of going up against them on their own turf won't put him off from rescuing his gal. Love must truly be blind if it means getting your head kicked in.

The first level begins with the vigilante taking a quiet stroll down a sidewalk in the Big Apple. The kidnappers aren't ones to sleep on protection and

send bodybuilders, hawks and other burly bad guys to sub out this minor nuisance. *Vigilante* isn't too original in his methods of dispatching the opposition —



punching and kicking is the order of the day with a machete or two thrown in to deal with the real bad nuts.

On the first level the players are fairly mild with only knife men and pistol toting hitmen posing a serious threat, the mass of skinheads are easily dealt with if you can get them before they take on you. If the vigilante gets to the end of the

first level he only has to take on a clubman and a brain blessed lookalike to reach the van holding Madonna captive. With new scores come new enemies armed with chains, knife angels reading a book in the Harvey Lowenstein and get tougher end-of-level macho men.

Vigilante was one of the better arcade beat-'em-ups thanks to its simplistic control system — a feature which greatly enhanced gameplay. This has not been lost on the Engine conversion, making a good beat-'em-up with steadfast gameplay, if a little pricey.



PC SCORE
75%

rom card: \$29.95

Vigilante is arcade perfect with no noticeable differences to the coin-op. Graphically excellent it is a significant improvement on *Clubhouse Master*, although its long term appeal is dubious.

"Love must truly be blind if it means getting your head kicked in"

Take to the skies as a fire-breathing reptile in

DRAGON SPIRIT

from

You, the great soldier Anul, are blessed with dragon spirit — the power to transform into a blue dragon at will. This handy power is in great demand at present as the fair princess Aloia has been kidnapped by the horrific dragon Zaxell. Being the unfriendly sort, Zaxell won't give her back without a struggle and, with nine levels between you and her it ain't going to be easy. Once in the clouds you begin to cause a flap by shooting down pterodactyls, killer swags and other members of Zaxell's army.

True to the coin-op, each of Zaxell's friends must be defeated at the end of each level. The first-level guardian is a relative of the Loch Ness Monster who breathes fire in your general direction. Later levels take you over volcanic regions, jungles and solar regions where many a Dragon has taken bait of Zaxell's cohorts.

The standard shoot-'em-up here is spiced up by the collection of eggs to increase the

PC SCORE
65%

Rom Card: \$29.95

Dragon Spirit looks good, featuring a well animated dragon and levels rich in graphical and musical variety. All in all a well executed conversion of a not-so brilliant coin-op.



dragon's firepower, and energy levels to provide him with extra heads. However, even if you've got the maximum of three heads and fireballs galore bursting from your mouth, one hit is all it takes to knock off a head and take you down an

energy unit.

Dragon Spirit wasn't the greatest of arcade machines to start with and this conversion fails to thrive. What saves the day is the simple but addictive gameplay combined with an original scenario.

"A well executed conversion of a not-so brilliant coin-op"

**"TOUCHDOWN"... FOR THE ROUGHEST
TOUGHEST GAME FOR ANY..
SPORTWISE, STREETWISE KID,**

STREET SPORTS AMERICAN FOOTBALL

Call the shots in a rough and tumble game of tackle football... out there on the streets!! Select your three-player team from the best kids on the block then pit your wits against the computer or a friend...

Call the plays on the radio or in the construction site, but watch out for potholes and potholes. Make the game as easy as you want or as tough as you can handle. Set your own custom playbook and hand-picked players, you'll still need superb strategy and a bit of luck to drive the ball in that game-winning touchdowns.

IBM 64118
\$9.99
\$14.99
IBM PC
\$9.99
\$14.99

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CHOP CHOP!

● **HACK 'EM**
and
● **SLAY 'EM**
on the
● **PC ENGINE**

It's tiny, it's fierce, it's from Eastern lands and no, it's not a Zenitsu – the PC Engine has officially arrived in Britain, thanks to Micromedia. And to celebrate the new Japanese invasion, Micromedia are offering a PC Engine plus three games to the winner of this contesting chop!

The PC Engine will work with any VGA/RT display – such as the Amiga monitor – and the three games are *Motory Run* (top-speed racing), *Tale Of The Monkey Path* (fantastic arcade adventure), and *N-Type* (needs no introduction...).

And the runner-up can capture the flavour of the Orient too, with an amazing sword – a Japanese Bokken, carved in natural wood and intended for warrior practice! (Exhaustive TGM tests have shown that the Bokken – pictured here – is also useful for getting things down from high shelves, playing ninja golf, and giving glaffles one in the eye.)

All you have to do is rate the top four features of the PC Engine from this list:

- 1 Megagames
- 2 Arcade-quality graphics
- 3 Multichannel stereo sound
- 4 Instant loading
- 5 Multiplayer interaction
- 6 Fast processing
- 7 Advanced micro-circuitry
- 8 Compact design
- 9 Built for the future
- 10 On/off switch

Write the top four features in order (just using the numbers – eg 8 6 7 2) and send your answers on a postcard or the back of a second envelope, along with your name and address (typed), to: **PURE MAYHEM WITH THE PC ENGINE COMP, TGM, PO BOX 88, LUDLOW, SHROPSHIRE SY8 1DB** to arrive by April 26.

But **STOP!** – there's *two* more things to do. First, to pick the winners we also need you to complete a **Feedback**: in not more than eight words, say why you'd like to own a PC Engine.

And finally, if you'd like to receive further info about the Engine, please write the word **YES** in the upper left-hand corner of your postcard/envelope (the side with the answers on).

Usual rules as printed on the contents page apply.



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CONFRONTATION: COIN-OP

No time for Robin Hogg to relax after the ATEI show. This month a mixed bag including a look at *Metal Hawk*, *Rainbow Arts'* new coin-op label, and what to look for in second-hand arcade machines.

SLOT NEWS

SEGA looks to back peddle with the release of *Thunder Blade II*. No mean Terminator this time round but the too-of-the-range Famer F-16. Even faster than its predecessor this one looks set to be a shoo-in this summer. We doubt US Data and Activision are vying for the conversion rights. *Way, Way Power On!*

Looking quite a way ahead Sega have *After Burner 2* now in general release in Japan. Essentially the same in gameplay

it's the further adventures of everyone's favourite F-16. Great if you like Afterburner but not much different from the existing machine.

Finally, Namco's *Slipping in Action* has discreetly entered UK shores. A dual player variant on *Green Beret*. *Mile* is disappointingly unoriginal but enjoyable and as even a well presented Namco game, not one that looks set to put Namco back on top of the pile, though.



It looks nice, but check out the controls before you think of putting one in your living room!

METAL HAWK

Namco

The Thunder Blade II theme creeps into dedicated machines again as Namco's *Metal Hawk* is finally introduced in one of the familiar design: flight cabinets. *Metal Hawk* is mass destruction in the air. Taking the side-down perspective of *Thunder Blade* Namco's game sees you at the controls of a super advanced attack helicopter. Your mission in this desperate hour of need is to take on and destroy the enemy's entire military might - Navy, airforce, army and all.

Helm-tron pilot over with *Metal Hawk* takes you and your helicopter deep into enemy territory armed to the teeth, back and clear with air-to-airthing-dangerous missiles and all with layered graphics being expanded and compressed to create the illusion of height. Graphically it may not look all that good close-up when its layered graphics reveal, but the speed with which they zoom up to meet your earthwards spiralling 'copter' can keep your stomach permanently up in the air. Hydraulics enhance an already remarkable flight sensation and the meticulous quality of the graphics sets the scene for a game with more action than *Thunder Blade*.

As *Metal Hawk* is multi-way movement the *Thunder Blade* does quite a step forward. Learning to use the full three dimensions of movement while trying to attack

ground based and air targets takes a lot of getting used to. The rewards for all these aerial attacks sees the chopper zoom off to the next sector battling with bombs high up in the clouds, battleships out at sea and all in three dimensions.

Rainbow Arts are coming out with all guns blazing in the battle against *Thunder Blade*. The all-way directional movement expands on the gameplay concept behind Sega's coin-op and gives the player a great sense of freedom. Veterans may find the controls a little odd at first and the lack of head-on sequences a cop-out but *Metal Hawk* delivers in-out and out returning action. Who can ask for more?

THE DARK CHAMBER

Rainbow Arts
(Preview)

The German programming team *Rainbow Arts* has a familiar name when it comes to computer games. Now they're

trying their hand at coin-op machines. The first of five games called *The Dark Chamber* is to be released through *Rainbow Games*, a sister company of the *Arts* formed in late '87.

The in-house development in preparation for the creation of 5 new games has produced the *Flare* 2 motherboard, a 32-bit processor operating at 15 Mhz is at the heart of the system with 16 channel stereo sound, 350,000

Specialist graphics as *Rainbow Arts* venture into the arcade with *The Dark Chamber*





Using the Atari 2600 (bottom), 16-pin arcade games extend to over 200,000 versions near The Last Dragon (above) and many others.

world of colors and an 80 expansion facility for hardware sales.

The Dark Chamber looks superb and will no doubt have the game presentation and quality that Rainbow Arts are renowned for. New creation talent unfurled by

current trends is always good but whether the public will take to the games in what is a crowded arcade scene is debatable. Rainbow Games certainly believe in the system and are entering on the new game Monster Olympics to follow within a month.

FROM MICRO TO MOTHERBOARD

CON-OP conversions are commonplace in the computer games field. Conversions to the arcade however are less so and no 'home generated' game has yet taken the coin-op scene by storm. Better known but mostly unsuccessful conversions include *Robotix*, reworking of *Robotix* (and the ill-fated *Waydiner* and *Bravestorm's* *Chaplin*). More recently we've had Ocean with their involvement in *Dark Seed's* *RobotCops* and *Blade* with one of the most unlikely but welcoming trash conversions so far - the *Arnimede* Software punks game *Fists*.

The gap between software

companies and coin-op manufacturers is beginning to narrow as the cross-influence spreads. Nintendo are installing console games in their *Psychosix 10* and *Arcade* are trying to bridge the gap with their revamped *Super System* System. Arcade makers Sega are trying to bridge as all with their *Mega System*. This dual to the *Psychosix 10* contains conversions of their existing consoles but uses the 16-bit MegaDrive console system as a technology base. If Nintendo haven't seen up the market already then Sega are in with a chance.

BUYING SECOND HAND COIN-OPS

THEY may not be the most common of Christmas or birthday presents but video coin-ops are much sought machines by the arcade crowd and veterans alike. As much as, in fact, that information Desk is regularly inundated with readers enquiring about them.

Arcade machines fall into two distinct types - the dedicated games and videos. The former type of coin-op is just based around the video system and leaves little room for expansion. With the latest architecture comes a larger design than normal with the cabinet using dedicated designs and a designer price to match.

Examples of Dedicated machines include *Star Wars*, *Street Fighter*, *Super Sprint*, *Dark Run*, *Atlantis* and many more coin-operated systems. *Arnimede* isn't included in this

category as it is quite easy to convert it into Konami's *The Last Dragon* conversion little more than a change of PCBs.

Video games are a lot simpler to handle with their compatibility of design and mechanisms along with the presence of the JAMMA standard interface link. Through the JAMMA link a standard PCB connection is achieved in that most of the recent PCB software can directly convert into a universal cabinet and run almost immediately (Sega and Taito proving an exception with their own unique systems).

Earlier PCB's were a mixture of standards and not all of them recognise the JAMMA standards. To counter this interface link can be bought bridging the non-compatible gap between JAMMA standard either the universal cabinet and the PCB (generally

anything before the era of *Robotix* or *Light's* a potential non JAMMA compatible PCB). The plethora of different standards as well means different links of varying configuration.

BITS AND PIECES

WHILE cheaper systems may have a sound cabinet the internal mechanisms, monitor display and inevitably joystick controls, may have taken a battering. Most traders recommend purchase of a complete system, because when you start buying bits it can get very complicated indeed (even with an electrical engineering degree around).

This article is a universal cabinet complete with internal board and mechanisms, monitor along with two joysticks and three independent buttons per stick. After all why deprive yourself of the chance to have dual player fun with only one stick? The monitor must be able to move through 80° if you want to install vertically scrolling games. Most monitors are primarily horizontal, a lot of the recent systems incorporate both horizontal and vertical movement within one monitor. The standing up on end of the monitor is a relatively easy job providing you know where everything goes and how to re-install the cabinet and board around it afterwards.

On the electricity front the power drain is surprisingly little with reliable 100W input required down to 10W maximum (using power down to 5W in some cases). Most importantly, don't forget about the interface link for the later PCB's when you're considering installing older PCB's.

HOW MUCH A CO?

All complete packages go, video game cabinets vary immensely compared with the high cost and inflexible offers available on dedicated systems. Below listed a wide selection of prices for complete systems. Don't expect to be able to buy a *Starline Cultural* and then be able to buy something else. A few obscure '4' obsolete PCB - based new PCB's serviced anything from

£500 to £1000 and up depending on the company behind it, the potential, game complexity, concept, technology level and a host of other factors (not to mention the trader's mark up).

MACHINE PRICES

Our Run £1700 - £4000 (from *Star Wars* to *Deluxe* version)
Thunder (Black) £1000 - £2000
(Covers all versions)
Chase HQ £2500
In Down *Star Wars* £475
After Burner £2000 - £3000
(Covers all versions)
MPC (or more £1500 - £4000)
From bottom and sides is full blown dual player 'mini' table-top hydraulic version
Operation Wolf £3000
Joust £1500 (Superb value for money considering you get a dual player cabinet and a free PCB)
Super Ranger £250 (the above)
Rastan (Sega) £1000
Scramble £1000 (value if only for the cabinet)
Donkey Kong
Footy £200
Alexander £150
Power-Oh £5000
Double Dragon £1000
Indiana Jones £250

ON THE MINUS SIDE . . .

ALTHOUGH it is possible to get hold of most types of arcade machine, the amusement trade handling the machines is primarily for the trade only and remains aloof from the public that pays their wages like it directly or indirectly. On-going support for any obsolete purchase is rarely provided although repair services are available.

If you're not put off by this check the classifieds in trade papers such as *Coin Slot*. Alternatively try classifieds in newspapers, electronics or entertainment magazines or have a word with your local arcade manager as to the source of his machines.

OUR BEST subscription deals are available from *COIN SLOT* (Bally Street, Nelson, Lancashire).



ROBIN HOGG'S PLAYING TIPS

■ YOUR GUIDE TO BETTER GAMING ■

■ OPERATION WOLF

All formats

Boost the counters, leave the innocent unarmed – and increase your score with these tips.

Level 1

Don't shoot the nurses – the best way of avoiding this is never to aim your right halfway down the left-hand side, which is where the nurses appear.

Use just three or four grenades on this level.

OP WOLF: SPECTRUM LIVES

If the tips aren't enough to free those hostages and increase your score, try this cheat routine for infinite lives and money. Turn the program into your Spectrum, use it and then start the Operation Wolf again as normal.

Thanks to 'The Mystery Hacker' for all these tips and POBOS – and Steve Archer if anything goes wrong when you press Ctrl+Alt while playing, as the hacker suggests!

10 0000 11 0000 12 0000
13 0000 14 0000 15 0000 16 0000
17 0000 18 0000 19 0000 20 0000
21 0000 22 0000 23 0000 24 0000
25 0000 26 0000 27 0000 28 0000
29 0000 30 0000 31 0000 32 0000
33 0000 34 0000 35 0000 36 0000
37 0000 38 0000 39 0000 40 0000
41 0000 42 0000 43 0000 44 0000
45 0000 46 0000 47 0000 48 0000
49 0000 50 0000 51 0000 52 0000
53 0000 54 0000 55 0000 56 0000
57 0000 58 0000 59 0000 60 0000
61 0000 62 0000 63 0000 64 0000
65 0000 66 0000 67 0000 68 0000
69 0000 70 0000 71 0000 72 0000
73 0000 74 0000 75 0000 76 0000
77 0000 78 0000 79 0000 80 0000
81 0000 82 0000 83 0000 84 0000
85 0000 86 0000 87 0000 88 0000
89 0000 90 0000 91 0000 92 0000
93 0000 94 0000 95 0000 96 0000
97 0000 98 0000 99 0000 100 0000

Level 2

This level is really easy, a 'real level'. So don't use any grenades – save them for level 3.

Shoot the parachutes as soon as possible, also get the window and the break damers. And watch out for the little boy who runs from left to right.

Level 3

You should still have a good supply of grenades – and you're going to need them. But it's best to wait the grenades for helicopters.

Don't shoot the girls (remember you can't shoot them).

Good news: your damage level is restored to full fighting fitness when you complete this stage.

Level 4

The massive butch man with the big gun can only be shot in the head, so don't let your right arm wander below their neck. But always shoot helicopters before humans.

More good news: your ammo is restored at the end of this level.

Level 5

The hostages are on this well-

guarded level, and it's tough, so be careful. Don't shoot the dynamite when an escaping hostage is onscreen – it will kill him.

But basically use your ammo, use your grenades, use everything – just watch out for those hostages, as they run right to left along the centre lane.

Level 6

The hostages again go from right to left. A lot of shooting is necessary.

Butch men, helicopters, tanks... the lot need blasting away. Just keep the gun going. And don't miss one "F" bottle or grenade, because they're vital.

■ DRAGON'S LAIR

Amiga

Kevin Giffiths of Wolverhampton has been enjoying his way through this moustache game. Here are some of his findings to help in your quest...

■ Disk 1

The Bridge

When Dirk takes through the bridge, do nothing at all. The tanks start to move towards him. Then press the fire button once. As Dirk swings his sword, push up to climb back onto the bridge and escape.

The Room with the Bottle

As Dirk walks towards the table with the bottle on it, the sign on the back wall starts to flash. As Dirk gets closer to the table, the door on the right flashes. When this

happens push right to move onto the next screen.

■ Disk 2

The Bat Cave

On this screen you start on either the right-hand or left-hand side, running down a flight of stairs. Just before Dirk reaches the gap, push on the opposite side wall. As soon as this happens push either right or left in the direction the stairs are running.

The Room with the Tentacles

As Dirk enters the room a tentacle attacks him from above. As it does, press fire once. When the weapons rack at the back of the screen flashes, push up twice. Dirk will then jump forward.



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■ WE WANT YOUR TIPS!

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PS: We Barry Morgan please send us his address in handwriting (he's an even more out there) to collect this month's software prize!

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COMPLEX COMIX

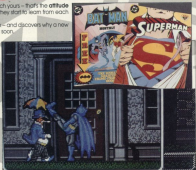
You scratch my genes, I'll scratch yours – that's the attitude of game and comic artists as they start to learn from each other.

TGM finds out what they think – and discovers why a new 2000 AD science could appear soon.

I started illustration and then I came to games. Look, it's the closest thing to comics I came straight from college to Pixelart. So here Jon Walker, a game-designer and graphic artist currently working in California for Psygnosis, and his close friend for him, at least, games offer a perfect opportunity to recreate an experience like graphic novels and visual imagery of today's comics, with all the animation, flexibility, and of course interaction that the printed page does not allow.

Anyway, says Walker, "games aren't hard to be that flexible and they don't have to work in a single... here I can do as I please and that's the only way of many programs being in that interactive world... For instance, Gary Liddon, who's just completed an arcade adventure game 'Tiger for Fantasy', some of the things he's in the business.

There's much more to the comic influence than licenses. As Walker says, "I work comics into the game... I use comic-style of symbolism in the loading screens and so on, we're hoping to get a comic in the box. Anything to do with comics



"I'm really willing to get into."

After all, it's surely no coincidence that games and comics so often lead the same themes: coded subculture, elite futurism, anti-establishment, impulsive missions against overbearing police, and sheer nastiness.

And probably the greatest comics influence on the ideas of games has been 2000AD, most especially its iconic team in its 1970s peak. Walker: "I used to like 2000AD but I don't like it anymore... it's quite powerful. A lot of the good stuff has gone to America."

At least, 2000AD might have held the balance of power till the new generation of graphic novels like Frank Miller's *Sin City*, the Dark Knight Returns and, most famous, Alan Moore's enormous, graced, 1980s-era arrived around 1988.

It's because of those that you have to put quite a lot of the good stuff into the game, particularly in the case of Walker.

mean, more subtle than most sex
crimes. We're anything but hard-
core romantics.

© 2004 Blackwell Publishing Ltd *Journal of Internal Medicine* 255: 105–112

And the computer game has been around longer than the graph is novel. So why hasn't the influence gone the other way -- from the small screen to the world's largest?

True, a few novels, such as *Shelter* and *God's graphic novel* from Mile, have been produced using computers. There's also now a commercial package for the Amiga, *God Day's Cornerhouse* (TIGARD14), but the printed colour work of modern graphic novels might as well be produced on a conventional art package and the best option later.

Frank Lencioni, Managing Director of Team Builders, which conducted both workshops and *Business The Day* around the globe, has an answer.

Shouldn't expect that there are not many compatible games that can be taken into other media," he says. "I think it's got to be the computer itself working from the outside. It may well go the other way, but I don't think it's developed enough yet."

Speaking of Agents, a Channel 4 series which looked at games and cinema for five episodes in the New Year, he observes: 'I appreciated the comic section, I appreciated the games section. But they weren't really comparable. The mid-west film could have been realised.'

And as for computer technology, entering the world of network and hard-disk learning, he says: 'I can't see that one, not, really.'

"Computers are such a part of personal vision, broadly speaking to the state of the technology — at the moment it's expensive. Anyway, I'm not sure I need them for a personal vision."



Twelve is spelled, *Charles Brown*, the first-year sophomore from Seattle's University of the Pacific. *Charles Brown* also directed the film.

100

www.bnl.gov

Joe Walker's Comics, a comic-inspired role-playing game adventure featuring an "Indiana" protagonist of the future, will appear from Palace Software on CD and floppy.

The game, and which makes it promising to many different sectors, is possible to satisfy the comic-arted target, is still in its early stages - but research reported include:

■ **Forbidden everywhere**

One sign of the comics boom is the growth of the London's Forbidden Planet specialist chain—starting from a single London site, it now stretches shops in Glasgow, Dublin, Brighton, Milton Keynes and Cambridge. And there's *Topcomix* in Newcastle.

To keep up to date with the latest news, try *PLANT*, PLANT's online magazine devoted to all things botanical, from the familiar . . . and of course, *botanica*. It's published every two weeks.

■ RUNNING OUT OF LICENCES?

Most of the main-book characters have now been translated into digital, says Mike Sweeney of Three Rivers. "This way we're immortalizing, but it certainly seems that *Life* will find people who've never read *Report from a Horse*." *Life*'s *Life* has appeared on a computer now.

Among featured acts: The Roots, All-About Entertainment, 102.1 and Golden State's 92.3 FM. For more, visit www.1021.com.

Fortunately, 200,000 characters alone feed popular finance subjects — effects analyzed are aluminum bog, Renewal Power Energy, JadedBible and Green

Journal of Economic Surveys

But whatever happened to Judge Gault and Herb Jones? Before 1968, Attorney General Ramsey had no authority to remove judges and juries. They'd entered the service of the state and not the president.

Hungarian team Hobbes were sent into the Judge, Mike Lewis told the staff of The Baller CP that James M. Hays of 1987's FGM Days and Phoenix were sent printing copies of the day's findings on arms control.

The marriage is heading into Fiorini's continued chastity — Roger M. Mason, Managing Director of Macroeconomic Information Systems, would only get 10% of the "they've been told it [the deal] would be serious people." Asked whether Mason's law would turn return to games difficult, he gave an emphatic "absolutely not" — perhaps a case of Fiorini's taking off more than it could absorb.

But the film has attracted Pat Adams, the attorney who won the budget-cutting rights to all the games Florida and other producers are negotiating for the Mike Jones estate—presumably for the recently launched hit game *Agent 47* (rated). So watch this movie.



NEC

PC Engine

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Chen + Chen



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Compact and Video Games

The sleek, detailed and smooth. Oh, perfect!

Compact and Video Games

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Compact and Video Games



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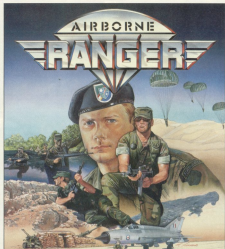
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The future looks dark

TWILIGHT 2000

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Eleven years into the future the Earth is deep in the grip of a catastrophic global war. For five years, nuclear, biological and chemical weapons have ravaged the planet. With the famine and disease that followed the battle, more than half the world's population are dead and billions are sick or starving.

As the war advances, the destruction of industry and of transport and communications systems brought about the total collapse of civilian government. Only the various warring armies remained as real cohesion, and even the military command structure became increasingly fragmentary as old regiments broke down and supplies became exhausted with no possibility of replacement.

Players in *Twilight 2000* must face this bleak reality as they take the role of soldiers in one of three warring armies, scavenging for food and fuel, and struggling for day-to-day survival against the radiation-strewn wastelands that are the remnants of Europe.

Twilight 2000 is a complex enough role-playing game for the serious nature of its subject matter. Most RPGs offer an optimistic, escapist setting for players to explore, and even those with a doomsday slant tend to have some constructive element. *Twilight 2000's* dark future, for instance, is used as the focus of a thoroughly realistic game, and even for the most such as *Call of Cthulhu* tend to be set in a fictionalised past that distances players from the real events involved. But in *Twilight 2000* West End Games have produced something quite different – a near-future game that gives players the chance to face the horrors of their future. The setting is no futuristic dystopia but a detailed, realistic future, involving a carefully thought-provoking atmosphere. The rules of *Twilight 2000* have a number of similarities to its more recent stablemate *Paranoia 2000*, and are presented in a similar style. The manner in which two face-to-face combatants, one for players and one for referee, with collaborative efforts produce the shape of events flows in a more chaotic, an impromptu, is a short introductory adventure booklet and a colour campaign map of the war zone in Poland.

The character generation procedure reflects the military setting in which the players find themselves. As well as determining standard characteristics such as intelligence and strength, players also will have to find out the character's unit, military experi-

ence and introduce the basics of the role and combat systems.

The *Twilight 2000* system is simple but effective. Each five-point character table enables players something challenging. The system rates the character's skills as a Tank, each tank has a safety rating, Average or Difficult, and a particular skill or attribute which is important to performance of that role. The combination of the two gives a number which represents the dice value needed for success. Thus an attempt to fix a motor breakdown would be at least ten based on the Mechanic skill, and a player would have to score twice that skill level or less to repair the vehicle. The combat system is similarly straightforward, providing that moving play with no need to refer to charts or tables, and that the system is as simple as the rules of *Twilight 2000* are. Weapons, vehicles of a whole range of types, chemical weapons and so on.

contracted, the symptoms and medical treatment.

The medical conditions add further background texture to the form of a historical outline of the five years of war, plus some details of war-torn Poland and the warring armed forces that inhabit it. Poland is the setting for introductory adventure "booklet" *Escape from Krakow*, which gives some players and release the chance to gain familiarity with the rules and how to play them, and to make their way to safety after a chaotic battle in which the US 101 Division was virtually wiped out.

On the whole *Twilight 2000* is simply but effectively presented. Neither the rules nor the background material are particularly extensive, but they are well chosen for a referee who doesn't mind using his or her imagination to expand on the details of the game as required. The bleak atmosphere of the imagined future is kept up well.



Death, disease, catastrophe and it's only 11 years away – the future world according to *Twilight 2000*

The referee's manual also includes an Encounter section, with suggestions on how to handle the variety of often deadly situations that characters may come across in their adventures, such as military convoys, refugees, ambushes and the others left by background events. Rules are also given for various other matters, such as the effects of radiation, such as typical diseases and psychic plagues, together with details of how these diseases are

and consistently enhanced by a number of black-and-white pictures scattered throughout the rules. The doomsday, apocalyptic world of *Twilight 2000* certainly isn't appealing to all roleplayers but its unique and stimulating setting provides a very different challenge to the imagination than that offered by other, more light-hearted games. It is a game to be played often, and it's well worth a try.

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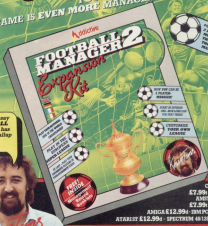
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CREATURE FEATURE

It was a dark and stormy night. Doctor Talleben switched on the machine and gazed, half in awe and half in revulsion, at the monstrosity he had created. Then he decided to send it in to TGM's Autumn Computer Art Show 1988 — where it joined the **glorified horrors** shown here.



■ P.O. Fox hopes to forge a career in graphic design — and he certainly seems to be getting the career way about it. *Warhead* was drawn on the 85" using *Image Life*. It started out as a somewhat of a portrait, but developed into a striking fantasy picture through experimentation with *Image's* stock functions.



■ This cover picture is one of many available on *Image's* public-domain disks from *Imagebase for Software*. It costs £3 to join the club, and that includes the latest edition of their disk-based magazine, *Imagebase* you may buy later retail at £2.50 each. For a list of programs, disks and more, contact *Imagebase for Software*, P.O. Box 87, Blandford Wiltshire SN2 1ST ☎ 01245 366062.



■ *Muscle* (shown here in a 'silly young chap' — by his own admission) but his artwork is certainly attention-grabbing. Doctor O. Muscle was drawn on *Image's* *Image Paint II* using a restricted palette, mainly made up of different shades of purple, to give that dark, menacing appearance.



■ *Evil* is another of *Sharon Long's* award-winning pieces. It received a third placing in the art show, along with *Muscle* (which appeared in TGM915).



■ *Sharon Graham's* *Evil* was inspired by the work of TGM/IMAGECAP's cover-designer Oliver Frey. *Sharon* used *Image's* *Image Paint II's* mask and clone features to create the atmospheric shading.

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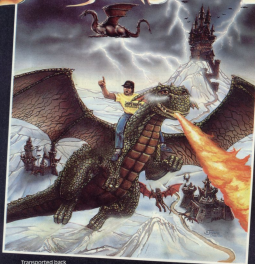
- 1 Which of the following is not a class of boxer? a) light-fly, b) feather, c) middle-weight.
- 2 In which round did Frank Bruno finally lose in his famous February 1989 fight with Mike Tyson?
- 3 What does IBF stand for?
- 4 Which of the following European champions is ex-Swiss as Linel's Blanchard, d'Arcovelli, d'Jacobson, or none of those three.

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Simulations ☐
RPG ☐
Strategy ☐

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(tick one box for each item)

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Yes ☐

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30) ARE THE SCREENSHOTS big enough?

Yes ☐

No ☐

31) ARE THE COMMENTS too short or long enough?

Yes ☐

No ☐

32) HOW OFTEN DO YOU AGREE with the reviews?

Always ☐

Mostly
Rarely
Never ☐

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Always ☐
Sometimes ☐
Never ☐

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Yes ☐

No ☐

(if No, go to question 49)

35) WHICH BANK?

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Sax Mifst ☐
Midland ☐
Lloyds ☐
TSB ☐
Post Office/National Giro ☐
Royal Bank of Scotland ☐
Yorkshire ☐

Other ☐

(for office use only) ☐

36) DO YOU HAVE a building-society savings?

Yes ☐

No ☐

(if No, go to question 51)

37) WHICH BUILDING SOCIETY?

Staffordshire ☐
Halifax ☐
Abbey National ☐
Nationwide Anglia ☐
Lloyds ☐
Santamount ☐
Yorkshire ☐
Alliance & Leicester ☐
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38) WHICH OF THE FOLLOWING do you own, or intend to buy in the next year?

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Video camera ☐
Portable video ☐
CD player ☐
Hi-fi ☐
Satellite dish ☐

Own ☐ Intend to buy ☐

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season was the last season for which
data were available for the 1997-1998
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64100

THESE RESULTS WERE OBTAINED FROM THE DATA
OBTAINED FROM THE FOLLOWING STUDY:

HOW TO ORDER:

1. **Identify the problem:** The problem is that the company is not meeting its sales targets.

2. **Analyze the problem:** The company is not meeting its sales targets because it is not effectively marketing its products.

3. **Develop a solution:** The company should develop a new marketing strategy that focuses on reaching its target audience.

4. **Implement the solution:** The company should implement the new marketing strategy by hiring a marketing agency and launching a new advertising campaign.

5. **Evaluate the solution:** The company should evaluate the effectiveness of the new marketing strategy by tracking sales and customer feedback.

1. **Identify the problem.** The first step is to identify the problem. This involves understanding the symptoms and the context in which they are occurring.

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Dial A Prize!

Phone-in fun with TGM!

Hello, operator? Get me the TGM Hotline if you please. 'Certainly sir, but which one?' They have two this month, it's a telephonic solution to the computer revolution? Whaaa!

Well, there you go. The TGM Hotlines are in operation again. Just pick up your phone, dial either number and listen to a fast-paced two minutes of information detailing release dates for the top games for March and April – plus the new News Update line. As always, there's a brilliant competition and this month we've teamed up with Electronic Arts for a special Populous competition!

Information – on line!

Printed here is the number which connects you direct to the TGM Hotline service. And we've got 160 lines, open 24 hours a day. So don't worry about the service being engaged. Ring this number and listen for just two minutes as we tell you what games are coming out, and where!

Or grab the latest news on what's happening in software by ringing TGM's News Update line on 0898 330000. We can get her stuff on the News Update service quicker than any magazine can get it to print – so don't lose touch, use News Update!

For the information we're giving the Hotline is cheap. The phone call will cost you 25p per minute when you call during off-peak time (Monday 6pm-8pm, and all day Saturday, Sunday and bank holidays) or 50p per minute during standard peak-time (Tuesday 9pm-Monday). The TGM Hotline is operated by TGM Magazine's London production office, Chatterbox Ltd.

Don't miss out... pick up the phone and dial the TGM Hotline.

Hotline

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0 0 0 0

**News
Update**

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WIN

POPULOUS!

AND LOADS OF BITS TO
PLAY IT WITH – FROM
ELECTRONIC ARTS!

If you've read the review of Electronic Arts' latest 16-bit masterpiece, Populous, you'll be itching to play it and create a few continents, defeat the odd race and generally play God or Satan, depending on your temperament.

Now Electronic Arts are offering anybody person the chance to play Populous against the creators of the game – Building Productions – over a modem connected to either an Amiga or

STI. All very well and fine, but what if you don't own a modem or serial connector? No problem. Electronic Arts are giving three away free! So, if you win the first prize (for 1P and 4 megabytes only) you'll receive two copies of Populous, a serial connector and a modem!

And don't all you 8-bitners worry, because the two 100 entries from 8-bit owners will win Electronic Arts' game of their choice!

HOW TO ENTER

Dial the number (good, good) and listen carefully to the three questions. Fill in your answers in the boxes provided, and complete the last-making sentence given to you over the phone.

When you've finished the questions, write your name and address and computer format, and send the whole lot to: POPULOUS HOTLINE COMP, TGM, PO Box 18, Ludlow, Shropshire SY8 1DS. All entries must reach us by April 15 1989 and, as always, follow the competition rules – you'll find them on the contents page.

| | |
|---|--|
| 1 | |
| 2 | |
| 3 | |

Complete the sentence given to you over the phone in no more than 20 words:

Name.....

Address.....

Postcode.....

Computer format.....

My choice of game.....



BACK BYTES

We were happy too when we discovered *Zenop* — and it winked at us! Read Toolbox (page 102) for the first news on Amic Software's incredible Aniga animation system, complete with winking demo, and watch TGM for a full review.



CD-ROM — is the future perfect? Barnaby Page has his doubts about software's silver platter, which some maintain will provide huge adventures with stunning sound and screens. See *Controversy*, page 112.



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WHAT THE **** ARE COMMS ANYWAY?

Ever wanted to reach out and touch an ST on the other side of the world? You can do it - just for the price of a few cables, a black box, some disks and British Telecom's pound of flesh.

Exclusively for TGM, comms wizard Zog takes the mystery out of modems and explains what they do and how.

When I was a lad, computers were room-sized beasts with flashing lights, enormous tape drives and some supplies that would have done justice in a housing estate. Programmers, single-breasted, demanding their rights to rooks in quiet offices, smokes cigarettes and spilt coffee on the machinery, obviously had to be placed somewhere else. Thus some computer communications born.

And some amazing home's swiftest piece of work with a whirling fronted in a standard kit comprising signals, a computer, and a keyboard and a screen. What went on at the time didn't matter to the communications equipment - but what one end

wanted to talk to the other, it used a special device to produce a standard signal.

The signal was then passed down the cable and decoded again at the other end by another bit of circuitry. This standard now goes under the name of RS-232C or 150 to show lineage.

Microcomputers are now with us, and many still have a 'terminal' mode, in which they become a 'dumb terminal'. You read the code of the program made, except to pass data to and from a port at the back of the computer. This port is just another line which you plug a cable capable of carrying those RS-232C signals to the computer at the other end.

To become a dumb terminal,

your mine has to be running some sort of communications program. But the problem of bytes - from the keyboard to the port, from the port to the screen - is only the case of a device called a pack-apt.

A key for combination of bytes is represented by early the program; anything else typed on the keyboard is passed to the port to be transmitted. However, when a special 'key' is pressed, the program recognizes it and takes some sort of action instead of transmitting the character.

This action usually consists of producing a pop-up menu, from which actions can be selected. Now the keyboard is used to make menu selections - making you press is passed to the port. A second key key, such as the return key, menu for pressed to take the menu again and put you back on sending things to the port - and there to the land of your cable.

So why type everything? You probably have a perfectly good disk drive or two just idly lying around - set them to work too.

File and lingo

Just access a file on disk with the computer in the same way as to the port and save it. There, instead of having the two keys, just get the comms program to let driver enough to send the data file to the port instead. This rather silly-sounding procedure actually comes into use when you need to send the same stuff to the remote computer again and again. Not to right now, and (having said that) you'll

never need to type it again.

What wonderful thing you, especially his boy's requirements and things! You can also for data files themselves - you could save a word-processed letter, or a program, on disk and send it to a remote computer.

And, of course, that big machine at the other end needs to be a big computer, since as far as your computer knows it's only talking to a peripheral device like a cable. The other end could equally well be another home computer, a dumb terminal, a printer or RS-150.

What about? Lightly, that among RS lines (don't think! Robert Scahill/Super's keyboard?) at 150, and thought long and hard about little streams of electrical signals running up and down cables, and what happened to them at the ends.

'Well, for most have remained, if the far end sends you read a load of data, you'll see a big file, at the highest speed it can manage, and your end is old, or tired, or busy in some way, then what happens?

Reginald Spiffington (?) then added a few extra wires to the wire he already had, so he had a second stream of signals for the system to work, and used them to send control signals between the ends.

This was not a simple task, because the two ends of a cable are not necessarily synchronous - that is, one end isn't continuously following the other one, via loads of pulser, what is done just precisely in step.

Dr. Friedrich Engelhard was working with synchronous equipment, a brain-twisting world where given data would occasionally live off their own legs rather than think too clearly about data arriving at some port just where most inconveniently.

CONTACTS

Names

Public Domain 100 (Special Interest Group) 01 257 0000

Kewall (John Phillips, University of Lancaster) 01 695 141

01 251

Modem modems

Printed from London, 020 444 4444

Geeks (John and John) 01 257 0000

Telecom Gold phone 01 257 0000

By 1000 1000 (modem) 01 257 0000 and 01 257 0000 (11 257 0000). Also if data file, no party and our way to should work on most systems.

Modems: a sound idea

Modem convert data to a series of tones, and vice versa. The tones are audible frequencies which can easily be sent over the ordinary telephone network, but you obviously need a second modem at the other end to decode the signals back again.

To us humans, modems sound like a sort of whistling while you work. This whistling is what you'd hear if you were dialled into a computer system on the phone - a modem will dial your computer to send you some useful 'tone-rings' and keep you from an answering machine from the modem at your end. (A fax machine makes a similar sound for similar reasons.)

Once it starts this 'carrier signal', the modem both generates it itself to start sending data over the phone network. You can't speed up or slow down this. Because of the non-linear relationship of phone lines, and the bandwidth that they can carry, modems just are as fast as ordinary bits of cable for transmitting data.

Luckily, cable has problems, so each computer has its own RS-232C port to its own modem, and the two modems connect through the cable line. In 150, speak to frequency shift keying, for name-droppers.

Asking as both modems speak at a speed that the other can't expect, everything is fairly slow.

And, of course, everything, there are a couple of odd things like ports and stop bits, but they can wait for now...

Getting smarter...

Modern modems are much faster than older models. The revolution started when American company Hayes began manufacturing what they called 'smart modems', which had their own processors inside. This meant you could send remote computers to the modems to your computer and do everything.

You could hand it a phone number and either dial the number or tell it to answer the phone if it rings. Automatically or after any of the other suggested modem set-up.

Other companies followed suit, but because of the success of Hayes, their products became virtually an industry standard - so most firms stick to the Hayes protocol.

you need a special cable called a "null-modem" - just to confuse you totally . . .

You also have to configure the modem to work at the right speed, parity, etc. for what you have in mind. This was once all done with switches, either on or in the modem, but now you can probably get it all from your communications package.

Because a lot of people have thought about how to detect and correct errors in transmission, particularly where sending important data down a line with limited interference, good communications packages will probably also support one or more methods of error correction (protocols). Again, both ends of the link have to have the same protocol for the system to work.

The use of a good system adds only a small overhead in transmission time where sending over a clean line, and virtually guarantees that data is error-free. One such protocol is called Kermit, and it's a public-domain package - in other words, evidence of it, from time to time, up to your mailbox, are readily available and cost only a few pounds (or pay for the tape or disks). There can also be some new versions of Kermit, either for fun or for new computers as they appear.

Though several expensive communications exist, a public-domain group will probably have a convincing case. Phones or modems available for your machine. These packages have

Kermit as a protocol, along with several others. They also have clever extras such as phone numbers (for the modem to dial), log files, function keys, automatic modem start/stop, etc. etc.

To check you have it, go to the manual or something and then you need a modem, a communications package and some odd bits of cable. The modem may be interesting in which case the computer will just plug into the phone socket - but more probably it will be a separate little box. Ideally you should have software which supports both textfiles and graphics protocols.

Finally, here's a thought. What happens if you get a computer which is linked via modems to dozens of phone lines, and then get loads of people to call it in on one? It's this central computer runs a special program as well. It can even provide players with a set of software in which they can interact, talking to each other and others with each other - in the world of the multiuser game or MUG. More about MUGs, bulletin boards, networks, and modem hardware will be covered in TON over the next two or three issues. And to discover the future of long-distance games-playing, look back in TONMHS . . .

■ *The single programmer who works at a London-based technical trade publisher who writes about computers in several magazines. He'll be back by the next issue on this series continues.*

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BACK BYTES GOES PROGRAMMING

pages = Amiga BASICs + Amiga Devpac + starting C
if interest = programming

do while not end of page
read (pages)
end do

end if

Battle of BASICs: GFA vs HiSoft

BASIC is a fairly standardized language, with only minor differences between versions of the same era, so most people can pick it up when transferring to a new system. For instance, if you can program in standard BASIC on a Spectrum, you can get to grips quite soon with GFA BASIC.

Not so with Microsoft's GFA BASIC version 3.0: this is more like a cross between C and PASCAL, with a few bits of BASIC here and there, but this could be an advantage, as most professional business programmers use C, PASCAL or BASIC—here you have a hybrid, and you can even include C or



assembly-language subroutines in GFA BASIC programs, making it suitable for a development team.

Generally, everything is made easy, from making the mouse movements to getting a lock from your bank manager (well, maybe that's a bit unrealistic, but only for a small all your short list)

C may be a trendy language, yet its flexibility has often led to different programmers writing in widely different styles—and haven't met knowing where to start.

But some enthusiasts have realised Robert Kernighan's public Learning to Program in C (224 pp, 128 pages) takes you through from the basics of arithmetic to variable typing, sophisticated control structures and modular programming, and even some editing, sample programs are provided, and there are also exercises and a few subroutines.

Learning to Program in C, Prentice Hall (Publishing), The Computer Group, 100 Brook Road, Englewood, NJ 07632. 0130 465-1581 or 061-7796. The book's ISBN is 0 013-02115.

Amiga Devpac gets it all together

What do you want for 40 quid? How about putting inside three whole folders, which when opened reveals two diskettes, a manual, and a huge, absolutely enormous bank of over 140,000 instructions on the 'huge' mode: it's only 5-inch (1).

This is HiSoft's software version 2, and at £59.95 it's a very fine package indeed, handling all the chores of Amiga assembly-language development. It's already had a brilliant career on the SE.

On the first of the two disks is the editor (Gasm2), which runs the whole system: the assembler (Gasm1) and the debugger (Gasm3) are on the second (Masm2). There are also example programs, one of which contains different routines.

On the second disk, there's a public-domain file (MSDOS) which looks clever like to create one single file. There are also other Windows editors.

But it's with Gasm2, the full-screen editor (FSE), that you actually can down and boogie with your keyboard. The FSE is really just a 're-graded' word processor for setting assembly language instead of letters to grandma, but extra pages come with

the assembler and debugger—both on also-memo—(vid, etc.)—the two for three, depending on experienced stages of practical development are made a whole lot easier.

The FSE allows you to load or write a source-code file and assemble in disk or directly to memory (where a 1 Mib RAM console handy). It is also able to save the source code before assembling a program, just in case it gets mangled (it's the editor's own option).

The editor has some options, standard word-processing features, such as search-and-replace, go to line number, go to top line, you can even insert more line anywhere, useful for adding music notation or off-word chunks of code.

Demp's file assembler has been improved on version 2: instead of having to know what the filename is, it shows you the contents of the current directory, and you select a file using the mouse.

You can also edit Demp's startup file, if you want.

Assembling

When you click you've finished your super-shape virus or whatever you're writing, you have to assemble it. The assembler option brings up a window, containing more options like type of object code

(executable or linkable, listings, destinations for object code (name, disk, or memory), etc.

If the assembler opens up, some errors didn't occur, it happens to the two programs: as well as the two options (1) and (2) — that is, to make, which will search through your programs to the line at which the error occurred. When you click, it will select this option again, and it searches for the next error, it always a short description of the problem.

Once you've assembled the program with no errors, you can run it, if you assembled to disk, you can load to your Gasm2—but if you assembled to memory, use the option menu. This means you in the editor when it's finished.

Bag of

Mismatches, the disassembler and debugger. Both bugs were made. The screen has three windows: one displays the program including the program counter etc. (it shows the actual memory of the Amiga in the code window), another window at whatever you select, Window Start Address, and one shows the memory as hex and dec.

You can edit the information

in any of the windows by pressing Ctrl+S.

To run the program (which the current program counter, press Ctrl+R—or, if you want to debug the program, use single-step mode. This runs the program one instruction at a time, so you can see how it affects the registers etc.

Improvements

Version 2.2 offers quite a few major improvements over the first version:

- The editor can run in 60-column or 80-column modes, depending on your Windows performance file.
- Windows can be changed from within the editor.
- The assembler is a lot faster—the manual says the absolute maximum speed more than doubled in 15,000 lines per minute, though the real improvement, 15,000 is the real.
- Finally, the little blue product guide for MS-DOS is extremely useful, with detailed descriptions about the instruction set, different processor architectures, and the register flags affected by them.

Jason Sheldon

Demp's version 2 is available from HiSoft for £59.95, you'll find their address in the code window's BASIC review.

We reckon that to make the most of you'll need an external disk drive, 1 Mib RAM, and as many Amiga 68000 books as you can afford.

INFORMATION DESK

Amiga mysteries dominate again as the Back Bytes gurus give you the meaning of micro life... but first, full facts on Microlink

Linking up

I am interested in Microlink. How do I get direct pricing?
David Lloyd, Aylesley

Microlink boasts Britain's largest bulletin board. It is essentially an electronic mail (email) service - users can send letters, telegrams, and faxes. Microlink also offers access to a number of business databases, and a mailroom game (Mailbox).

It costs £3.95 to join; thereafter, users are billed monthly for the facilities they've used, with a £1 minimum monthly charge.

But before you can start using Microlink you'll need a modem, software and a modem cable. Microlink provides all these for £1.75 in a special third line PC, compatible, PC's, IBM and B&B, and if you have a different computer, they'll send you a list of the software you require.

For further information and application forms contact Microlink, Pangea House, Salford Park, London Road, Watlington, Oxfordshire OX10 1AP (04295) 479448. You may find Bug's feature on contracts in this month's Back Bytes interesting, too...

What you Sega is what you get

How many different companies design and program video games for the Sega? Is it possible to tell which company programmed the game just by looking at the box it is enclosed in? Also, are all Sega games designed in Japan?
Neil Smith, Penzance



Is this a Japanese import that I see before me?

All Sega games go through Sega itself, but they come from many different companies - and when it's a coin-op conversion, you should find the name of the original company (eg Namco) on the box. As far as we know, all Sega games come through Japan, though its console is sold worldwide, the company is very centrist.

ST backup

A friend of mine owns a Spectrum with a Multiface box which allows him to make backup copies of all his software. Is there a similar aid on available for the ST?
Tony Santana, Gwent

Remarc's Perfect, producers of the Spectrum Multiface, have recently released Multiface ST (£49.95 plus £1 postage and packing). Just like the Spectrum and CPC models, Multiface ST can copy individual screens, programs or entire disks.

It comes in the form of a little black box which you plug into the cartridge port of your ST - the box contains a 64K 38554 card, some ST memory is used.

While the Multiface's 'magic button' is pressed, any program currently running is transferred and can be copied. When you release the copy, it will save in the place at which it was saved.

Remarc's Robot, 34 Elmwood St, Bournemouth BH9 4DZ (01204) 200-6255 (credit-card orders can be placed in 24 hours a day).

It's Seikosher!

I need a printer for my G4 and the only one I can afford is the Seikosha SL680. What kind of machine would I need to link it to my computer, and where could I get one from?
A Giff, Blyth

Bad news for G4 owners is that the machine has a nonstandard serial port, which prevents interfacing problems with most printers - they won't just plug in and go.

But the good news for you is that the Seikosha SL680 is fully compatible with the G4. There's no need for any special interface - just plug it into the serial port and it'll work. The Seikosha SL680 is

available from Peripherals for £164, including postage and packing.
Peripherals, Nine Enterprise Court, Pinfold Street, Northampton NN2 6BW (0605) 79 1771.

Amiga drumming

Could you please tell me if there are any drum machine programs available for the Amiga?
Graham Butler, Not Wotton

The excellent *Adventures in Rhythmic Productions* - also programmed this month's cover game *Produce* - has returned back in *1666666*. The program can hold up to 24 samples at one go and play back four at a time - one for each of the Amiga's internal channels. Fully 480K-compatible, *Adventures* is currently on special offer at £19.95.

Rhythmic Productions, 1 Bridge Street, Eastleigh, Surrey GU1 1BT (0434) 574181.

TV or not TV?

I am seriously considering buying an Amiga 500. However, I am not sure whether I should buy a colour monitor or not. What does the screen display appear like on a standard TV? Is it a

monitor that looks better?
And Walter, Johannesburg

Most Amigas are now sold with a TV monitor, and the quality of the picture is largely dependent on the standard of the TV used. Monitors give better definition and many include colour sound output too. In general, the difference between the two is unlikely to impact your enjoyment of a game.

Commodore's own monitor for the Amiga and C64/128 is available from Peripherals for £144 including post and packing. The address is in the question above.

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My CD write or ROM?

CD-ROM means nothing unless we can make it useful, says Barnaby Page

It happened with floppies. It happened with punch cards, when some single spark invented them to help count America's population in the late 18th century. It may be happening with digital audio tape (DAT), another "technology of tomorrow" that seems to prove tomorrow never comes. No doubt it happened with some tablets when the Lord gave unto Moses a new storage medium.

And now it's happening with CD-ROM — a method of keeping data on the compact disc, you already use for music. (For my lecture in 1984, I used an Atari Comshare in the first hour for technical background.)

But despite all the marketing about an information revolution, and despite Microsoft/Comshare's recent launch of the first CD-ROM game (*Capitaine of the Crown* on PC; see Preview), it's becoming clear that behind the hype there are several problems which will keep CD-ROM away from your home computer for years to come.

Surprisingly, it must be said, price is not one of them. Microsoft's product will retail for \$49.95 — admittedly it's only testing the market, and therefore they may not be looking for profit on it — and cheap CD-ROM drives are available for a handful of hundred quid.

In fact, the biggest problem is compatibility — the very thing that CD-ROM supporters mean the disk capacity. A CD-ROM disk can store up to 482MB, though for technical reasons the practical limit is 151MB. That compares with the 1600-1800 capacity of formatted 3.5" and 5.25-inch disks.

"All well and good," you say, "we can now keep over 1,000 3.5-inch games on a single CD-ROM drive, plug it in, and choose what we want to play but without looking for those boring old disks!"

Theoretically, yes; except from the fact that there aren't 1,000 3.5-inch games in existence — but think what it would cost.

Even given that you'd be paying for one comparatively cheap CD-ROM disk rather than 1,000 3.5-inch ones, and even given that the software house's duplication and distribution costs would be lower (for the same reason), and even given that the retailer's profit margin would be smaller (for the same reason), I reckon you'd still be looking at a five-figure sum.

And that's because however much the physical costs were reduced, you'd still be looking at centuries of programming work — and programmers have to be paid (though most would tell you neither to the contrary).

Indeed, Jim Mackenzie, Chairman of Microsoft (and its sister CD-ROM company Pergamon Compact Solutions), confirmed that the majority of their investment in a CD-ROM

product comes not in duplication but in getting the data on there. (Usually that's not a problem — CD-ROM is more suitable for storing huge amounts of text and pictures, and among Pergamon Compact Solutions' most-praised achievements is a complete parts catalogue for Boeing 747s. I found it had great depth and some admirable qualities, but the graphics were minimal and gameplay nonexistent.)

And Mackenzie's word on it is, at the launch of *Capitaine of the Crown*, that a typical CD-ROM costs just 110000-210000. That gives the price CD-ROM is a storage medium light years ahead of the kind of data most of us want in disks.

We may be unhappy with our 10MB 3.5" drive, but consider how long it takes programmers to make use of that disk and code when that graphics and sound, and then consider how much longer it would take them to reach the limits of, say, using PC's 1.44MB floppy drives and you'll see that though CD-ROM may be a compact solution, it's not the only one.

None the good news

Does this mean Lockbit's support is — at least it's interesting to not that companies are experimenting with CD-ROM, because it is useful in areas where huge amounts of unstructured data are necessary (eg libraries, databases of medical information, and so on).

Also, without wishing to sound sceptical, it'll never be the true data store saved on about 3000's Multi System simply because it's not

Japanese. It's industrially good for Europe to be at the forefront of an electronic technology for sure. Chips are dominated by the Americans and Japanese and consumers electronics (cameras, video etc) by the Japanese — but CD-ROM is partly the province of Philips, the Dutch firm, as well as Japan's Sony.

And, these benefits aside, there is a lesson for CD-ROM — except it won't be ROM any more. It'll be like a normal read/writable disk. Let's call it *WRAROM* (write, read and rewrite at random) — pronounced "Rover".

The single hard disk has only just arrived from Commodore (see this month's news, it'll be perfect for data-hungry graphics work — imagine how many forgotten screens you can store and recall without having to change disks, to imagine the advantage of having a 64000 hard disk on an Amiga, PC or ST, enough pictures could be stored to create complex and intricate).

Steve Jobs, one of the inventors of the Apple II, has seen the potential of WRAROM and put an incredible optical disk system in his recently-launched Macintosh. Tellingly, however, he has since had to add a normal floppy drive — presumably because there's no interest for software houses to bring out optical disk products just for the Mac.

Still, earlier this year, Sony released a standard-size optical disk system, and though it costs about £8,000 for the complete model, it's a welcome sign that the true potential of optical storage for computers — whether it's CD, Laserdisc, CD-i or what have you — is at last being appreciated.



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